

TANDBERG

150

MXP

- Designed for personal video in any workspace
- Integrated 8.4" LCD
- Quick keys for easy control of system
- Simple user interface
- Optional IM and webconferencing
- URI dialling
- H.323 & SIP support
- Up to 512 kbps IP
- Superior video quality incorporating the H.264 standard
- Standards-based embedded encryption (AES & DES)
- Protection against network interruptions with automatic Downspeeding and IPLR
- H.235 Authentication capable and supports SIP Authentication with Microsoft Live Communication Server (LCS)



Integrated keypad for both voice and video calls

USER GUIDE

Software version L4.x
D13640.04
March 2006



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In accordance with section (3) of the GNU General Public License, copies of such code will be provided upon request by contacting TANDBERG. Please contact us by using the Online Support section at www.tandberg.net or the "contact us" section of this manual. Please provide USD 10.00 for media and shipping.

Agfa

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CMU-SNMP

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Powering the TANDBERG 150MXP

Voltage: 100–240 Vac 50/60 Hz or PoE

Power consumption: 24 W max
(12.95 W with PoE acc. to IEEE 802.3af)

Operating Temperature and Humidity

This product is meant for office- and home-environment. This product is not intended for use in environments with extreme temperatures, excessive dust, moisture or vibration, gases, corrosive or explosive atmospheres. This product is not meant for use in medical environments or in connection with electro-medical applications with physical connections to a patient. The product is not intended to be used in vehicles, on board ships or aircraft, or at altitudes exceeding 2000 m.

Technical Specifications on the unit can be found in the product brochure available from our web site: http://www.tandberg.net/products/video_systems/tandberg_150_mxp.jsp

Operator Safety / Environmental Issues

For your own protection, please read the overleaf safety instructions completely, before operating the equipment and keep this manual for future reference. The information in this summary is intended for operators. Carefully observe all warnings, precautions and instructions both on the apparatus and in the operating instructions.



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Operator Safety & Declaration of Conformity Summary

TANDBERG 150MXP
USER GUIDE

For Your Own Protection

For your own protection please read these safety instructions completely before you connect the equipment to the power source. Carefully observe all warnings, precautions and instructions both on the apparatus and in these operating instructions.

Note! Keep this manual for future reference.

In the following text the symbol  denotes description of hazardous- or potentially lethal situations that could cause personal injury to the user or persons close to the equipment.

Water and Moisture



Do not operate the apparatus under or near water – for example near a bathtub, kitchen sink, or laundry tub, in a wet basement, near a swimming pool or in areas with high humidity.

Never install jacks for communication cables in wet locations unless the jack is specifically designed for wet locations.

Cleaning

Unplug the apparatus from the wall outlet or the Power over Ethernet source before cleaning or polishing. Do not use liquid cleaners or aerosol cleaners. Use a lint-free cloth lightly moistened with water for cleaning the exterior of the apparatus.

Ventilation

Do not block any of the ventilation openings of the apparatus. Never cover the slots and openings with a cloth or other material. Never install the apparatus near heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

Lightning



Never use this apparatus, or connect/disconnect communication cables or power cables during lightning storms.

Power Supply (AC-DC Adaptor) and Power Cords



The power supply has hazardous voltage inside. Never attempt to open the power supply.



The power supply provided with this unit is an unearthed, double insulated AC-DC adaptor. Always use the power supply (AC-DC adaptor) provided with this product.



Replace only with power supply specified by TANDBERG. In case the power supply or the power cord has visual damages, never attempt to connect the power supply to the mains outlet.



The plug connecting the power cord to the power supply serves as the main disconnect device for this equipment. The power supply with the power cord must always be easily accessible.



Route the power cord so as to avoid it being walked on or pinched by items placed upon or against it, paying particular attention to the plugs, receptacles, and the point where the cord exits from the apparatus.



If the provided plug does not fit into your outlet, consult an electrician.



Never install cables without first unplugging the device from the power supply.

Servicing



Do not attempt to service the apparatus yourself as opening or removing covers may expose you to dangerous voltages or other hazards, and will void the warranty. Refer all servicing to qualified service personnel.



Unplug the apparatus from the outlet and refer servicing to qualified personnel under the following conditions:

- When the power cord or plug is damaged or frayed
- If liquid has been spilled or objects have fallen into the apparatus
- If the apparatus has been exposed to rain or moisture
- If the apparatus has been subjected to excessive shock by being dropped, or the cabinet has been damaged
- If the apparatus fails to operate in accordance with the operating instructions.

Accessories



Use only accessories specified by the manufacturer, or sold with the apparatus.

Communication Lines



Never touch uninstalled communication wires or terminals unless the telephone line has been disconnected at the network interface.



Do not use the communication equipment to report a gas leak in the vicinity of the leak.

For product safety and electromagnetic compatibility this product complies with Commission Directives from EU: Low Voltage Directive 73/23/EC and EMC Directive 89/366/EEC

EC DECLARATION OF CONFORMITY



MANUFACTURER: TANDBERG Telecom AS

PRODUCT NAME: TANDBERG 150MXP

TYPE NUMBER: TTC7-10

DESCRIPTION: Video Conferencing Equipment

This product complies with Commission Directives:

LVD 73/23/EEC

EMC 89/366/EEC

This product complies with harmonised Standards:

EN 60950-1 : 2001

EN 55022 : 1994, A1/A2

EN 55024 : 1998, A1/A2

EN 61000-3-2 : 1995, A1/A2/A14

EN 61000-3-3 : 1995, A1

TECHNICAL CONSTRUCTION FILE NO.: D13681

YEAR WHICH THE CE-MARK WAS AFFIXED: 2004

For an official, signed version of this document, or details regarding documentation from the technical construction file, please contact TANDBERG.

Thank you for buying a product which contributes to a reduction in pollution, and thereby helps save the environment. Our products reduce the need for travel and transport and thereby reduce pollution. Our products have either none or few consumable parts (chemicals, toner, gas, paper). Our products are low energy consuming products.

TANDBERG's Environmental Policy

Environmental stewardship is important to TANDBERG's culture. As a global company with strong corporate values, TANDBERG is committed to following international environmental legislation and designing technologies that help companies, individuals and communities creatively address environmental challenges.

TANDBERG's environmental objectives are to:

- Develop products that reduce energy consumption, CO₂ emissions, and traffic congestion
- Provide products and services that improve quality of life for our customers
- Produce products that can be recycled or disposed of safely at the end of product life
- Comply with all relevant environmental legislation.

European Environmental Directives

As a manufacturer of electrical and electronic equipment TANDBERG is responsible for compliance with the requirements in the European Directives 2002/96/EC (WEEE) and 2002/95/EC (RoHS).

The primary aim of the WEEE Directive and RoHS Directive is to reduce the impact of disposal of electrical and electronic equipment at end-of-life. The WEEE Directive aims to reduce the amount of WEEE sent for disposal to landfill or incineration by requiring producers to arrange for collection and recycling. The RoHS Directive bans the use of certain heavy metals and brominated flame retardants to reduce the environmental impact of WEEE which is landfilled or incinerated.

TANDBERG has implemented necessary process changes to comply with the European RoHS Directive (2002/95/EC) and the European WEEE Directive (2002/96/EC).

Waste Handling

In order to avoid the dissemination of hazardous substances in our environment and to diminish the pressure on natural resources, we encourage you to use the appropriate take-back systems in your area. Those systems will reuse or recycle most of the materials of your end of life equipment in a sound way.



TANDBERG products put on the market after August 2005 are marked with a crossed-out wheeled bin symbol that invites you to use those take-back systems.

 Please contact your local supplier, the regional waste administration or <http://www.tandberg.net> if you need more information on the collection and recycling system in your area.

Information for Recyclers

As part of compliance with the European WEEE Directive, TANDBERG provides recycling information on request for all types of new equipment put on the market in Europe after August 13th 2005.

Please contact TANDBERG and provide the following details for the product for which you would like to receive recycling information:

- Model number of TANDBERG product
- Your company's name
- Contact name
- Address
- Telephone number
- E-mail.

Digital User Guides

TANDBERG is pleased to announce that we have replaced the printed versions of our User Guides with a digital CD version. Instead of a range of different user manuals, there is now one CD – which can be used with all TANDBERG products – in a variety of languages. The environmental benefits of this are significant. The CDs are recyclable and the savings on paper are huge. A simple web-based search feature helps you directly access the information you need. In addition, the TANDBERG video systems now have an intuitive on-screen help function, which provides a range of useful features and tips. The contents of the CD can still be printed locally, whenever needed.

We recommend that you check out the TANDBERG web site regularly for updated versions of this manual:

http://www.tandberg.net/support/documentation.php?p=User_Manuals

Finding the Information You Need

Thank you for choosing TANDBERG!

The TANDBERG 150**MXP** has been designed to provide you with many years of safe, reliable operation.

Your approach to the 150**MXP** documentation depends on what you want to do and how much you already know.

This User Guide has been divided into eight sections and an appendix. Each section provides different information.

Depending on your requirements and your familiarity with the 150**MXP** and video meeting systems as such, you may find that you use some parts of this User Guide often and others not at all.

Our objective with this manual has been to address your goals and needs. Please let us know how well we succeeded!



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Unpacking and Assembling the Unit

This section of the manual defines the different parts of your TANDBERG 150**MP** and shows how to connect the cables.



Unpacking, Assembling, and Connecting Your 150MXP

TANDBERG 150MXP
USER GUIDE

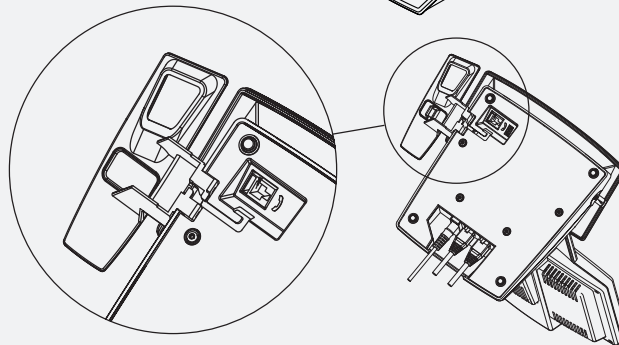
! How to configure the unit is described in Administrator Settings.

Assembling the unit is really easy. The system lies fully assembled in the box. Remove the accessories box and carefully lift the system out of the box. To protect the camera lens while installing, we recommend that you let the camera lens cap remain on. In the accessories box you find:

- LAN cable
- Power adaptor and power cable

Handset is an optional device that must be ordered separately. Contact your TANDBERG representative for more information.

Mounting the (optional) handset. Slide the handset bracket into the system's bottom plate tracks. Place the system in an upright position and lay the handset in its place. The handset is held in place by magnets.



TIP! If you have a single LAN connection only and this is in use by your PC already, connect your PC to the 150MXP and the 150MXP to the LAN to let both units have internet access.

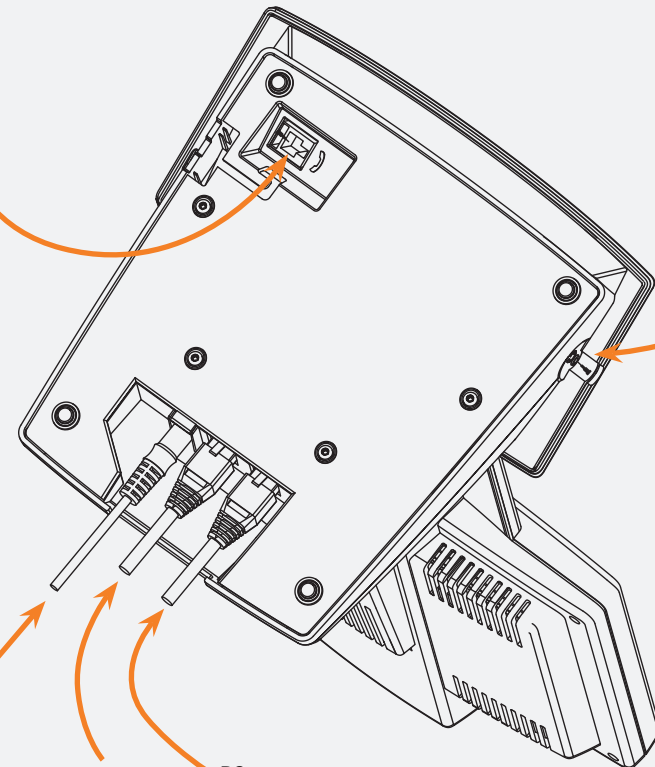
Socket for optional headset

The TANDBERG 150MXP has a 2.5mm 3-pole mini-jack connector at its right side marked with a headset symbol. This allows the user to connect a standard telecommunications headset to the system. Headsets with the microphone positioned in front of the user's mouth, connected to the earphone through a rod, tend to give more echo than earbud headsets with the microphone attached to the cord. TANDBERG recommends the Plantronics MX100 headset (<http://www.plantronics.com>, products > mobile). Note that the maximum outer diameter of the plug must be 7.0 mm or smaller. A plug with a bigger outer diameter will not fit the unit. Alternatively an extension cord may be used.

Socket for optional handset's cable

Power

Connect your LAN here
PC



Defining the Parts

Camera

The camera has manual tilt and focus. Turn the lens to adjust focus. (Tip! Press Selfview first to see your video picture). Tilt the camera by manually adjusting the tilt angle with the wheel to the right of the lens.

Microphone

Located at the top of the unit.

LCD Monitor**Loudspeaker****Handset**

Handset is an optional device. Contact your TANDBERG representative for more information.

Keypad

The keypad contains all the keys you need to control the system. See overleaf for more information.

Camera Lens Cap Docking (at the rear)

Use the Camera lens cap at the back side of the product to cover the lens when the product is not in use. The camera lens cap protects the lens and also assures you from involuntary broadcasting of your video image.

We recommend that you check out the TANDBERG web site regularly for updated versions of this manual:

http://www.tandberg.net/support/documentation.php?p=User_Manuals

Call Handling

In addition to its main objective; video meeting calls, your TANDBERG 150MXP is capable of even doing simple telephone calls.

Your calls can be made by means of Speed Dialling, Phone Book and Manual Dialling.

This section describes how to make and receive video and telephone calls, as well as how to use the Speed Dialling and the Phone Book.

In addition we bring up a few aspects of privacy regarding incoming calls that you may want to consider, viz. should the camera and the microphone be switched off when an incoming call occurs?



About Making and Receiving Calls

Your TANDBERG 150MXP is capable of making and receiving simple telephone calls in addition to its main objective; video meeting calls.

Calls can be made by means of [speed dialling](#) (five presets available for immediate dialling); by means of the [Phone Book](#) (which typically consists of My Contacts and a Corporate Phone Directory) as well as [manual dialling](#) (entering the “number” manually).

When dialling manually you may also define settings applying to your call. For presets (Speed Dialling and Phone Book usage) these call settings will be a part of each preset entry, hence there will be no need to define these every time you make a call.

Privacy. There are some aspects of [privacy](#) regarding incoming calls that you may want to consider.

In particular we are thinking of such things as: Should the microphone, as default, be switched off, so that the far end will be unable to hear you until you physically switch the microphone back on?

What about the camera? Should the camera also remain switched off until you physically switch it back on?

These topics are all discussed in this section of the manual.

Want to Use a TTY to Send and Receive Text?

You may hook up a TTY (Text telephone) to the 150MXP. The TTY is a device allowing hearing- or speech impaired people to communicate by typing and reading messages – see [Audio Settings](#) in the Administrator Settings section for more.

The Icons Appearing on the Screen



Microphone Off. This indicator is shown when the microphone is turned off. Press the **Mic Off** key again to turn the microphone back on.



Privacy. This indicator is shown when the **Privacy** key on the keypad is activated. No camera images are sent from your system when the privacy indicator is displayed. Press the **Privacy** key again to deactivate the feature.



Volume Off. This indicator is shown when the volume is turned off. Press **Volume +** to turn the volume back on.



Secure Conference, AES. This double padlock indicator is shown when AES encryption (Secure Conference) is active.

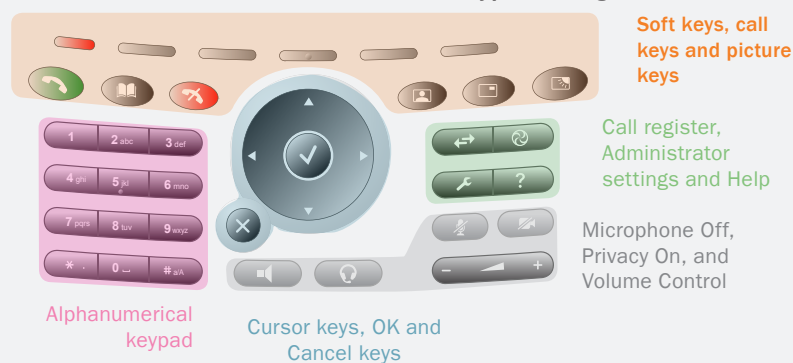


Secure Conference, DES. This padlock indicator is shown when DES encryption (Secure Conference) is active.



Not Secure Conference. This open padlock indicator is shown during the initialization phase for encryption. During this period the call is not secure.

Your TANDBERG 150MXP keypad at a glance



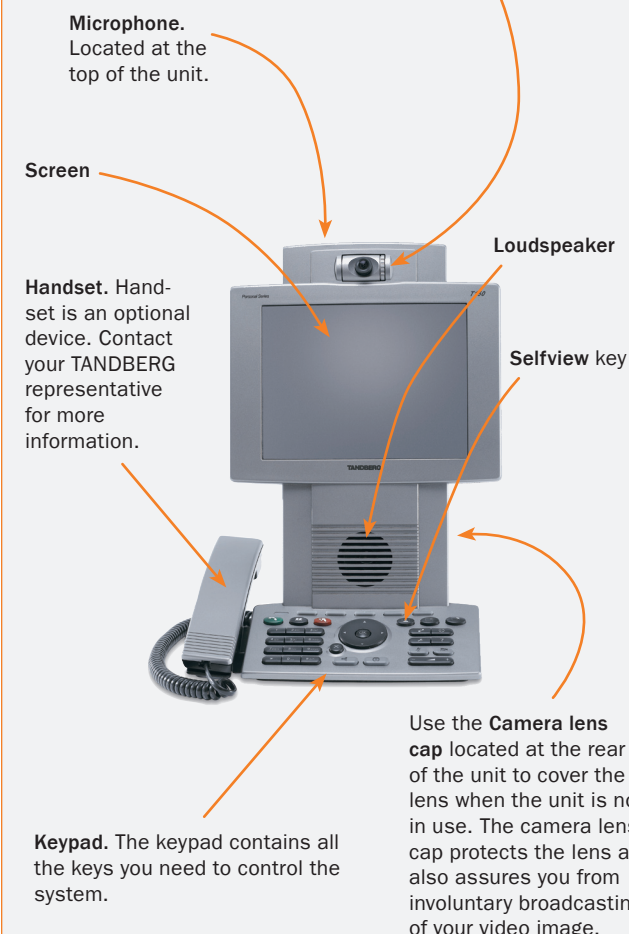
Keypad details can be found on the next page.

Your TANDBERG 150MXP unit at a Glance

Camera. The camera has manual tilt and focus. Turn the lens to adjust focus.

TIP! Press **Selfview** first to see your video picture.

Tilt the camera by manually adjusting the **tilt angle** with the wheel to the right of the lens.



A Detailed Look at the Keypad

Notification lamp

A red lamp is lit to indicate that you have an incoming call. The lamp is also lit when you power up the system and when you are in a call. When the lamp turns off, the system is ready for use.

Call key

Press the Call key to open the call menu. When you have dialed a number, press the call key to place the call

Phone Book

Press Phone Book to open the systems phone book. Store and recall your video contacts via the system Phone Book for easy placement of calls (see chapter 2.7 Phone Book for more information).

Numerical keypad

Use Number keys to dial video numbers. Use the star key to get the dot sign when dialing an IP number.

When you are in an input field where letters are required, the system automatically goes to letter mode. Writing letters works like on a mobile phone. Press the key that corresponds to your desired letter. Press the key as many times as you need to get the right letter. Change to lower or upper case letters with the # key, and space with the 0 key.

Cancel

Cancel takes you back one step in the menu system. Use Cancel also to delete characters in an input field.

Speaker

Press Speaker to activate the speaker. The Speaker key is lit when the speaker is active. Press Speaker again to turn the speaker off.

Soft keys

Context-sensitive soft keys whose functions are displayed on the screen.

Navigation keys and OK

Use the Cursor keys to navigate in the menus. Press OK to select menu items.

Selfview

Selfview displays the picture of yourself. Press Selfview again to turn selfview off.

Call List

Press Call List to see a list of your latest calls, both outgoing, incoming and lost calls.

PIP (Picture in Picture)

Press PIP (Picture In Picture) to get a smaller picture in addition to the full screen picture. The PIP is placed in the top right corner of the screen. Press PIP again to move it to the other corners of the screen. The fifth time you press PIP, it will disappear.

Display Settings

Brightness lets you adjust the monitor brightness camera brightness, hue, and saturation.

External Services

Your administrator or service provider may provide external services enhancing the applications available.

Help

Press Help to get a quick guide about how to use the system.

Administrator Settings

Press Administrator Settings to open the settings menu. Administrator Settings contains all the settings of the system.

Privacy

When the Privacy key is pressed, no camera image will be sent out from your system. The Privacy key is lit when the camera is off. An indicator on the screen also appears as you press Privacy. Press the Privacy key again to deactivate privacy. Use Privacy to prevent others from seeing your video image.

Volume

Volume + and - adjusts the volume of the speaker. An indicator on the screen shows the volume level.

Mic Off

Press Mic Off to mute your microphone. The Mic Off key is lit when the microphone is off. An indicator on the screen also appears as you press Mic Off. Press the Mic Off key again to deactivate Mic Off. Use Mic Off to mute your outgoing audio.

Headset

Press Headset to activate headset. Remember to plug in your headset in advance (see chapter 1.3 Connecting Cables). The Headset key is lit when it is active. Press Headset again to deactivate.

About Access Codes

Your TANDBERG 150MXP may, or may not, be set up to require Access Codes to be typed in before a call can be made.

Access Codes are used for two things; call restrictions and billing opportunities.

Call restrictions may be applied by installing a file of valid access codes that must be entered to permit calls to be made. This installation is typically made from TMS (TANDBERG Management Suite – available separately).

Billing opportunities. Assume that an access code is needed whenever you make a call. Your company may have different access codes for the different clients of your company.

Then, the access code used may be picked up by TMS to generate statistics on who is calling whom, when, and for how long time.

This information may later form the basis for billing clients or departments. Observe that in this case there will be no strict need for installing an Access Code file on your system – TMS will still have access to the codes you have assigned to the calls.

Of course, the two may be combined to form a *billing system with call restrictions*. This will then become a system that acts as forced billing.

Access Codes can be up to 16 characters long.

The Access Codes feature is activated in the [Security Settings](#) menu of the Administrator Settings. The activation/deactivation of the feature may be password protected by your System Administrator. If in doubt, consult your System Administrator.

Making calls when prompted for an Access Code

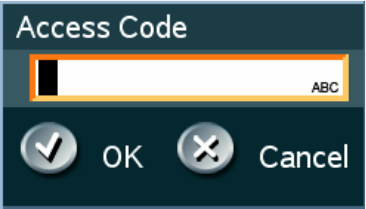
- 1

Prepare to make a call

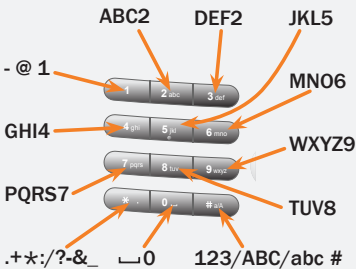
 - by [dialling manually](#)
 - by [using the phone book](#)
 - by using [speed dialling](#)
- 2

When prompted for an Access Code, enter the code using the Numerical keypad, which now will be set to ABC mode automatically.
- 3

Proceed with your calling as described throughout this section of the User Guide.



Accessing the alphanumeric characters



Toggle between **ABC** and **abc** mode by pressing the # key. To switch to **123** mode, press the # key for one second.

About Speed Dials

Wouldn't it be nice to have your five most prominent contacts available for calling by the push of a button?

This is what *Speed Dials* is all about. The five softkeys at the top of the keypad can be assigned for this – pretty much in the same way as favourites or bookmarks in your web browser. Note that you are not restricted to use Speed Dials for video calls only. Any mixture of video and telephone calls is fully acceptable.

You assign those five buttons in the [General Settings](#) menu described in [Administrator Settings](#). Note that your System Administrator may, or may not, have password protection activated to prevent unauthorized alterations of these and other settings. If in doubt, consult your System Administrator.

Using Speed Dials to Make Calls

Using Speed Dials to make calls is very easy. Just press the corresponding softkey and the call will be made. No need to worry about the Call Settings – they are defined by the Phone Book settings for that particular entry.

System asks for Access Code?
See [Access Codes](#) for details!

Example showing four out of five Speed Dials softkeys assigned

The softkey assignments are shown here.

Speed Dials softkeys not assigned, appear ghosted.

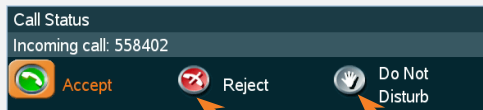


The Speed Dials softkeys.

NOTE! You must assign at least one of your contacts to the Speed Dials feature to make these softkeys appear.

In our example, with four out of five Speed Dials softkeys assigned to Phone Book entries, this key is not assigned.

Incoming calls will produce the below menu*:



Accept the incoming call Reject the incoming call Activate Do Not Disturb

* Will not apply if *Do Not Disturb* has been activated or if Autoanswer has been set to **On** or **On + Mic Off**

To accept the incoming call, use any of these five methods:

- 1 Press the green **Call Now** key () on the keypad.
- 2 Use the **Cursor** keys to navigate to the green **Accept** icon () in the menu, if applicable and press the **OK** key () on the keypad.
- 3 Lift the handset, if applicable.
The handset is an optional device, which must be ordered separately.
- 4 Press the **Headset** key () if a headset is connected.
- 5 Press the **Loudspeaker** key () on the keypad.



To reject the incoming call, use any of these three methods:

- 1 Press the red **Call Reject** key () on the keypad.
- 2 Use the **Cursor** keys to navigate to the red **Reject** icon () in the menu, if applicable, and press the **OK** key () on the keypad.
- 3 Use the *Do Not Disturb* feature.

A Few Words on Privacy

You may want to set up your system so that the microphone and/or the camera are switched off whenever you receive an incoming call.

By pressing the **Microphone Off** key () and the **Camera Off** key () you will prevent callers from hearing you and seeing you without your control (press again to activate).

To combine convenience and privacy, your 150MXP may be set up to automatically accept an incoming call, but with the microphone switched off. In this case you must switch the microphone back on manually yourself (just press the **Microphone Off** key to reactivate a disabled microphone).

You may also have your system set up so that you always must answer all incoming calls manually.

These settings are parts of the [Administrator Settings](#) available. Your System Administrator, may or may not, have password protection activated to prevent unauthorized alterations of these and other settings. If in doubt, consult your System Administrator.

Whenever microphone and camera are disabled, these icons appear on your screen:



NOTE! A message will be sent to the far end whenever you have disabled your microphone and/or your camera.

TIP! An alternative to the above could be the use of the *Do Not Disturb* feature to the right.

TIP! Whenever you receive an incoming call from someone listed in your Phone Book, the caller's identity will be shown on the screen, just like in a cellular phone. For more on the Phone Book, see [Phone Book Features](#).

Want to Change the Video Alert Audio Signal?

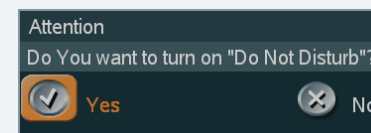
You are not stuck with the audio signal alerting you that an incoming call is on its way. This may be changed, see [Audio Settings](#) in the Administrator Settings section. Note that these settings may be password protected by your System Administrator.

Do Not Disturb

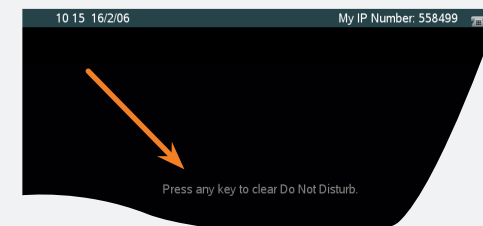
There is a *Do Not Disturb* function available on your system. When set to **ON**, all incoming calls are blocked from your system.

Use the feature as follows:

- 1 Outside a call, press the red **Call Reject** key (). A dialogue box will appear:

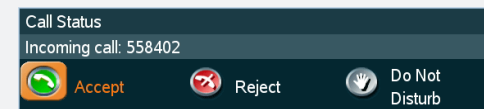


Press **OK** () to activate the feature. The screen will now turn black, and the following text will appear:



Press **Reject** () to leave the menu, keeping the feature deactivated.

- 2 When *Do Not Disturb* has been activated and you receive an incoming call, the following dialogue box will be produced:



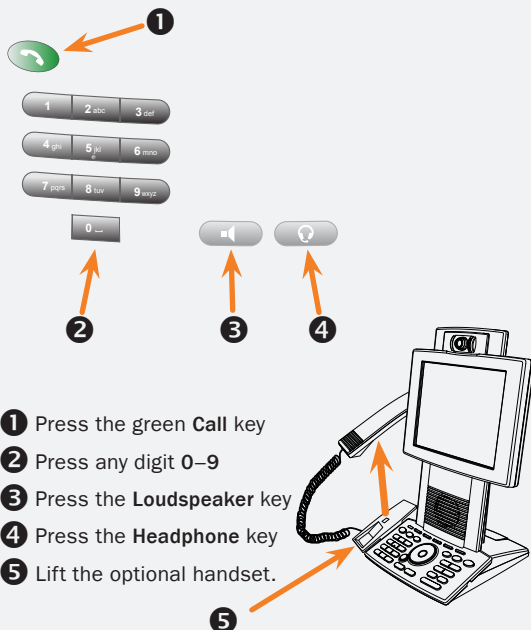
- 3 Use the **Cursor** keys to navigate and **OK** to make your selection and proceed.

NOTE! Assume *Do Not Disturb* has not been activated. Choosing *Do Not Disturb* when receiving an incoming call will then do two things: It rejects the incoming call (in the same way as choosing **Reject**), and sets the **DoNotDisturb** functionality to **ON**.

TIP! Whenever *Do Not Disturb* is activated, the far end will be informed that the called is busy.

Making a Video Call – Using the Phone Book

- 1 Open the **Call Menu** using any of these five methods:



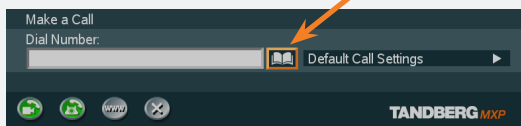
About the Phone Book

Using the Phone Book is time saving and prevents you from inadvertently calling the wrong number. The contacts are sorted alphabetically. The contact names are displayed in the list and the telephone or video numbers of the selected contact will be displayed at the bottom line.

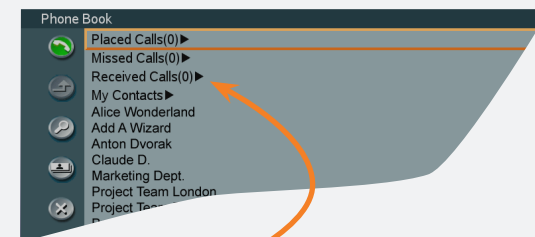
When selecting **Phone Book** the Phone Book opens showing the folders **Placed Calls**, **Missed Calls**, **Received Calls** and **My Contacts**. Global Contacts (if applicable), will be listed below these folders. See also [Phone Book Features](#).

System asks for Access Code? See [Access Codes](#) for details!

- 2 Use the **Cursor keys** () to navigate to the **Phone Book** icon and click **OK** ().

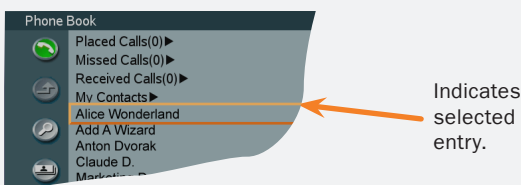


- 3 Use the **Cursor keys** to navigate in the list.



Any entry with an **arrow** appended is expandable using the **Cursor keys**. Navigate in the expanded list using the **Cursor keys** as usual. You may key in letters to navigate in the list – see also [Phone Book Features](#) for details on the use of the Phone Book.

- 4 Once you have located whom to call select the corresponding entry by means of the **Cursor keys**.



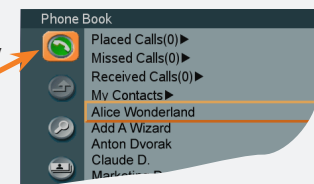
- 5 Press the green **Call Now** key () on the keypad,

or...

press the **Left Cursor key** to select the **Call Now** icon, followed by **OK**

or...

just hit the **OK** key whilst the entry is selected.



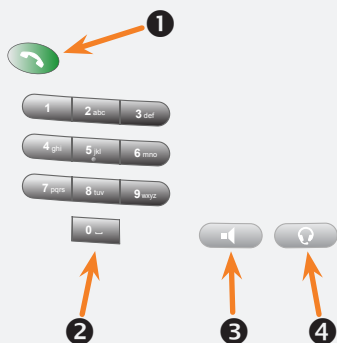
- 6 The name of the selected entry will now appear on the screen. Call settings will be set as specified with this particular entry.

- 7 Wait for the call to connect.

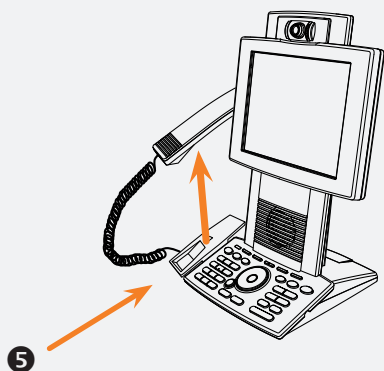
The call will be a video or a telephone call depending on the settings for the entry selected.

Making a Video Call – Dialling Manually

- 1 Open the **Call Menu** using any of these five methods:

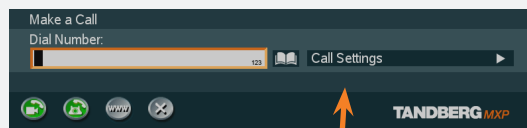


- 1 Press the green **Call** key
- 2 Press any digit **0–9**
- 3 Press the **Loudspeaker** key
- 4 Press the **Headphone** key
- 5 Lift the optional handset.



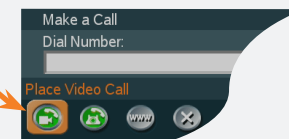
System asks for Access Code? See [Access Codes](#) for details!

- 2 Dial (i.e. enter using the keypad) a video number manually.

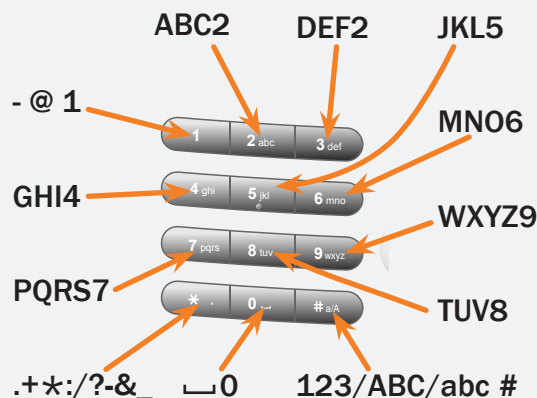


You may want to adjust the **Call Settings** before you start your video call, see [Making a Video Call – Adjusting Call Settings](#) for more.

- 3 Press the **Call Now** (📞) key or use the **Cursor keys** (⬅️ ➡️) to navigate to the **Place Video Call** icon and click **OK** (✓) to start the video call.



Accessing the alphanumeric characters



Dialling tips

- Toggle between **abc** and **123** by holding the **#** button depressed for one second.
- Toggle between **ABC** and **abc** by pressing the **#** button.
- Use ***** as separator in IP addresses. If a system is registered on a gatekeeper or border controller with DNS support, there are several ways to call into the system:
 - <IP address>
 - <E.164>
 - <H.323 ID>
 - <H.323 ID>@<domain>
 - <E.164>@<domain>
- To locate the **@** character press the **1** button whilst in **ABC** mode.



Want to make a simple telephone call instead?

Making simple telephone calls is explained in [Making Telephone Calls](#).

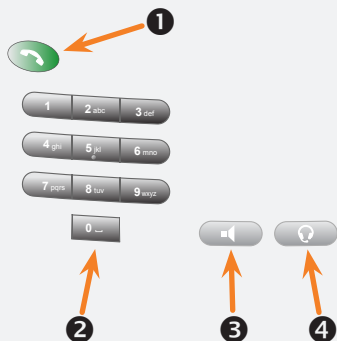


Want to make a call using the Phone Book instead?

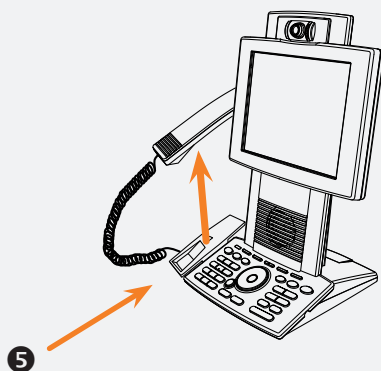
Making calls using the Phone Book is explained in [Making a Video Call – Using the Phone Book](#) and more on the Phone Book itself can be found in [Phone Book Features](#).

Adjusting the Call Settings

- 1 Open the **Call Menu** using any of these five methods:

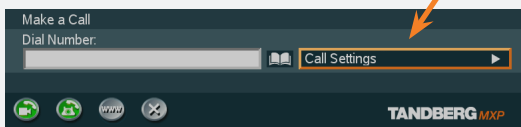


- 1 Press the green **Call** key
- 2 Press any digit **0–9**
- 3 Press the **Loudspeaker** key
- 4 Press the **Headphone** key
- 5 Lift the optional handset.

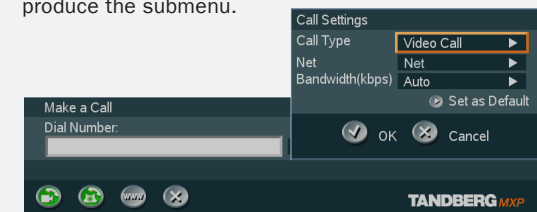


System asks for Access Code? See [Access Codes](#) for details!

- 2 Use the **Cursor** keys () to navigate to **Call Settings**

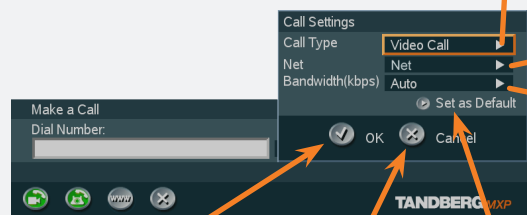


- 3 Press **OK** () or press the **Right Cursor** key again to produce the submenu.

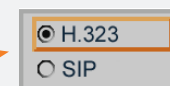


- 4 Adjust settings as required.

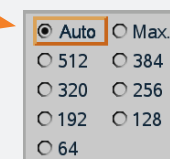
If a gatekeeper is present, you may place IP-calls using “telephone-style” numbers (an E.164 alias), according to the numbering plan implemented in the gatekeeper. The gatekeeper will then translate the dialed number into an IP-address (see [H.323 Settings](#) for more information about gatekeepers).



Call Type can be set to **Video Call** (default) or **Telephone Call**.



The **Net** alternatives are: **H.323** and **SIP**.



Bandwidth determines the quality of the video picture. The system will, by default, connect using **Auto Bandwidth**. This means that the system will establish a connection using a proper bandwidth for your call. The typical bandwidth used for IP calls is 384kbps. When bandwidth is set to auto, the unit will default to 384kbps.

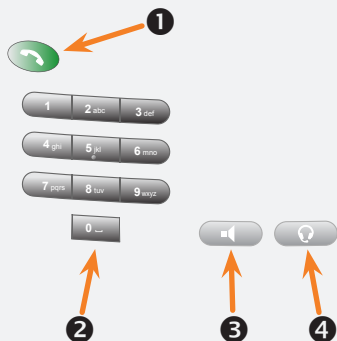
Navigate to this icon and press **OK** to leave menu putting changes into effect.

Navigate to this icon and press **OK** to leave menu undoing any changes – including any new default setting you may have introduced.

If you want to change the **Default Call Settings**, make the required changes to the **Call Settings** and navigate to **Set as Default**. Press **OK** to save these settings, which now will be the default settings for all future manually dialed calls.

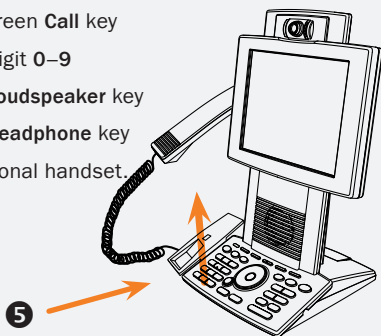
Making a Telephone Call

Open the **Call Menu** using any of these five methods*:



* Not needed when using Speed Dialling

- 1 Press the green **Call** key
- 2 Press any digit **0–9**
- 3 Press the **Loudspeaker** key
- 4 Press the **Headphone** key
- 5 Lift the optional handset.



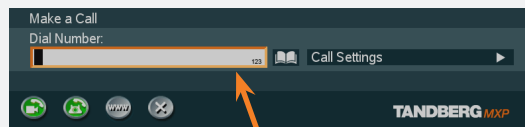
Requirements

The TANDBERG 150MXP comes with an internet interface only, it cannot be connected to a traditional telephone socket. Telephone calls from the 150MXP to the public switched telephone network (PSTN) will require the presence of certain infrastructure. Consult your System Administrator to get information on this and the prefixes you may need to dial to connect to the PSTN.

System asks for Access Code? See [Access Codes](#) for details!

Making a Manual Telephone Call

- 1 Dial (i.e. enter using the keypad) a video number manually.



You may want to adjust the **Call Settings** before you start your telephone call, see [Adjusting Call Settings](#) for more.

- 2 Press the **Call Now** (📞) key or use the Cursor keys (⬅️➡️) to navigate down to the **Place Telephone Call** icon to start the video call.



The procedure is similar to that of [Making a Video Call – Dialling Manually](#) – see that for more.

Making a Telephone Call Using Speed Dialling

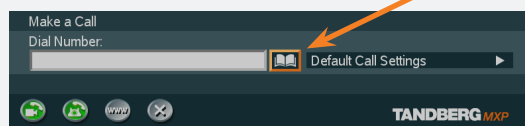
- 1 Press the softkey corresponding to whom you want to call.



- 2 Wait for the call to connect.

Making a Telephone Call Using the Phone Book

- 1 Use the **Cursor keys** (⬅️➡️) to navigate to the **Phone Book icon** and press **OK** (✓).



- 2 Use the procedure described in [Making a Video Call – Using the Phone Book](#), to locate the entry you want to call and to make the call.

The call setup for an entry will specify the type of call that will be made. If the entry is listed as a telephone type of call, a telephone call will be made, so there should be no reason to worry about the possibility of making the wrong type of call.

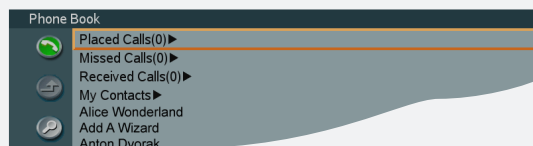
Accessing the Phone Book

To access the Phone Book, press the **Phone Book** button () on the keypad or select the **Phone Book** icon in the **Call** menu – see [Making a Video Call – Using the Phone Book](#) for more.

The Call Log – Placed, Missed & Received Calls

The **Call Log** – listing **Placed Calls**, **Missed Calls** and **Received Calls** – is essentially a set of lists of your system's call history. The lists contain the most recent numbers placed, missed, and received, limited to a maximum of 30 numbers for each list. The numbers remain in these lists until the system is restarted or the list is deleted manually.

Missed Calls lists all calls that were not received – either because you declined the call or just because you were not there when the call attempt took place.

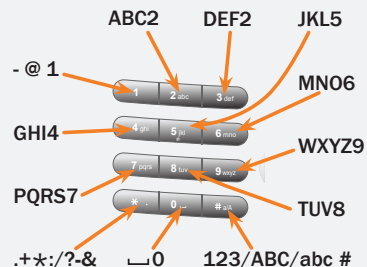


Navigate in the menu in the usual manner:

Use **Vertical Cursor** keys () to move up and down in the menu.

Press **OK** () or use the **Right Cursor** key to expand items with an arrow appended.

Accessing the alphanumeric characters

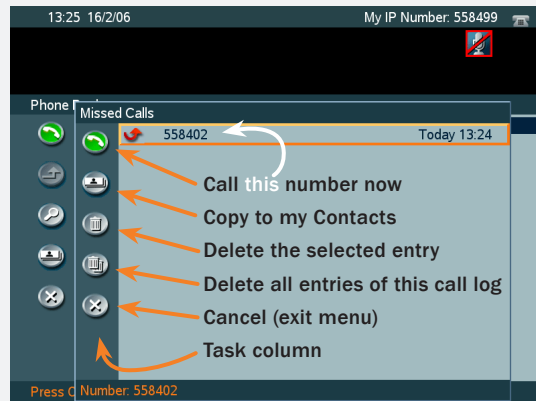


Toggle between **ABC** and **abc** mode by pressing the **#** key. To switch to **123** mode, press the **#** key for one second.

Call Log Options

Let us consider an expanded log of **Missed Calls** as an example. The **Placed Calls** log and the **Received Calls** log are exactly similar – with identical features.

Expand **Missed Calls** as explained in the **Call Log** frame to the left.



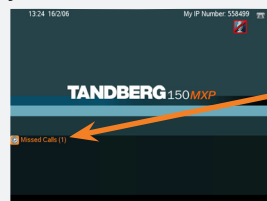
Navigate in the menu in the usual manner:

Use the **Left Cursor** key () to move from the **Missed Calls** column to the **Task** column.

Use **Vertical Cursor** keys to move up and down in the menu.

When you have located the icon representing what you want to do, press **OK** ().

TIP! Any member of these lists already listed in your Phone Book will appear with the name you have assigned to them and not just with the number.



The number of missed calls is shown in the **Welcome** screen

TIP! The contents of your Phone Book can be arranged in a tree structure with several subfolders. Use the **Up one Level** icon () in the **Task Column** to navigate back up in the tree structure.

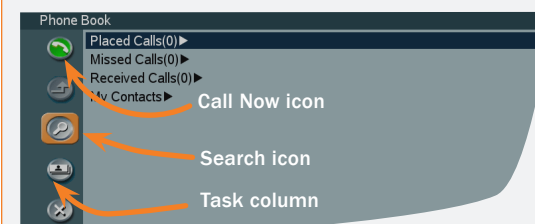
Searching in the Phone Book

The **My Contacts** may contain up to 200 entries and the entire Phone Book (which may include server based *Global Directories*) can be virtually unlimited in size. Hence, using the **Cursor** keys as the only navigation device can easily be a cumbersome experience. What to do?

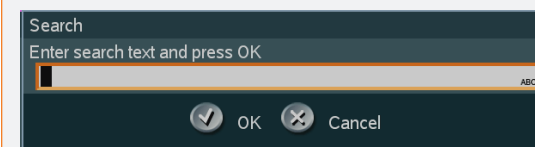
Enter **Quick Search by Letters**. Whenever you are inside the Phone Book navigating in the list of entries, the numerical keypad automatically switches from **123** mode to **ABC** mode. To locate a specific entry, just type in the first letter as with a cellular phone – see the lower left frame on this page.

If you need to refine your search, use the **Search** function:

In the Phone Book use the **Cursor** keys () to move to the **Task** column and then down to the **Search** icon.



Press **OK** () to open the **Search** dialogue box:



Enter the search string (the name) and press the **OK** key or move down to the **OK** icon and press the **OK** key.

(To leave the menu cancelling your search, press **Cancel** () or move down to the **Cancel** icon and press **OK**).

Use the **Cursor** keys to move to the requested entry, if needed.

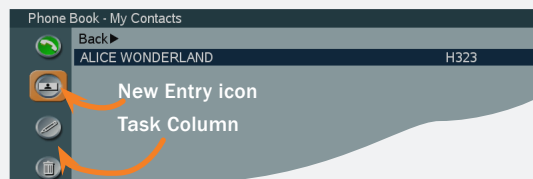
To dial the selected entry, move the cursor to the green **Call Now** icon and press **OK**.

TIP! When a search in the Phone Book is made by means of the **Search** function, contacts matching the search text are displayed only. Navigate to and click on the **Up one Level** icon () to return to the alphabetical list.

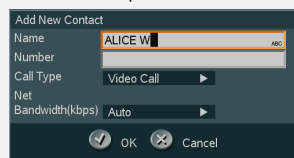
Adding a New Contact to My Contacts Manually

In the Phone Book use the **Cursor** keys (⬅️) to navigate down to **My Contacts** and press **OK** (✓) to produce the contents of **My Contacts**.

Use the **Cursor** keys to navigate to the **New Contact** icon (➕) in the Task Column.



Press **OK** to produce the **Add New Contact** dialogue box.



Enter the name of the new contact using the numerical keypad (which automatically enters ABC mode). The maximum name length is 30 characters. For details on this – see the lower left frame on the previous page.

Enter the number of your new contact by means of the number keys on the keypad (which now enters 123 mode) The maximum number length is 60 digits. Use * as separator in IP addresses. To switch to ABC mode, press # for one second.

Alter the default setting of **Call Type**, **Network**, and the default setting of **Bandwidth**, if needed.

Navigate to the **OK** icon and press **OK** to save putting changes into effect or navigate to the **Cancel** icon to leave menu undoing any changes.

Accessing the Phone Book

To access the Phone Book, press the **Phone Book** button (📞) on the keypad or select the **Phone Book** icon in the **Call** menu – see [Making a Video Call – Using the Phone Book](#) for more.

Adding a New Contact Directly from the Call Log

In the Phone Book use the **Cursor** keys (⬅️) to navigate down to **Placed Calls**, **Missed Calls**, or **Received Calls** and press **OK** (✓) to produce the contents of the selected item.

Use the **Cursor** keys to navigate down to the entry you want to add to **My Contacts**.

Now, while the entry to be added remains selected use the **Cursor** keys to navigate to the **Add to My Contacts** icon (➕) in the Task Column and press **OK**.

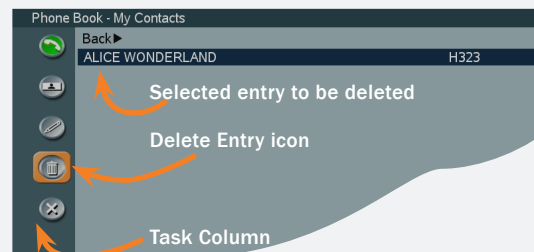


The Add New Contact dialogue box will now be produced – see [Adding a New Contact to My Contacts Manually](#).

Deleting a Contact in My Contacts

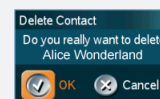
In the Phone Book use the **Cursor** keys (⬅️) to navigate down to **My Contacts** and press **OK** (✓) to produce the contents of **My Contacts**.

Use the **Cursor** keys to navigate down to the entry you want to delete.



Now, while the entry to be deleted remains selected, use the **Cursor** keys to navigate to the **Delete** icon (−) in the Task Column and press **OK**.

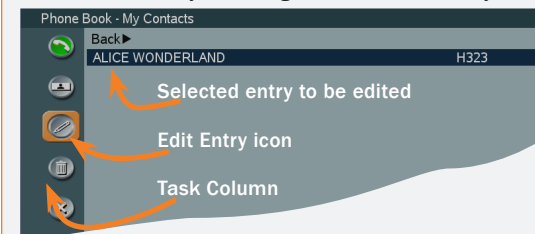
You will be prompted to confirm or decline your intentions:



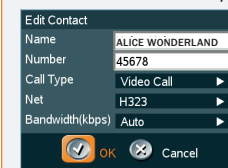
Editing a Contact in My Contacts

In the Phone Book use the **Cursor** keys (⬅️) to navigate down to **My Contacts** and press **OK** (✓) to produce the contents of **My Contacts**.

Use the **Cursor** keys to navigate down to the entry to edit.



Now, while the entry to be edited remains selected, use the **Cursor** keys to navigate to the **Edit Contact** icon (✎) in the Task Column. Press **OK** to produce the **Edit Contact** dialogue box.



If needed, edit the name of the contact using the numerical keypad (which automatically enters ABC mode). The maximum name length is 30 characters. For details on this – see the lower left frame on the previous page.

If needed, edit the number of your new contact by means of the number keys on the keypad (which now enters 123 mode) The maximum number length is 60 digits. Use * as separator in IP addresses. To switch to ABC mode, press # for one second.

Alter the default setting of **Call Type**, **Network**, and the default setting of **Bandwidth**, if needed.

Navigate to the **OK** icon and press **OK** to save putting changes into effect or navigate to the **Cancel** icon to leave menu undoing any changes.

TIP! We strongly recommend that you copy contacts often used to **My Contacts**. Note, however, that the local copy will not be updated if the **Global Contacts** are updated from the management system.

We recommend that you check out the TANDBERG web site regularly for updated versions of this manual:

http://www.tandberg.net/support/documentation.php?p=User_Manuals

Video Meeting Features

This section of the manual outlines the features available during a video meeting. How to establish a call with your TANDBERG 150MXP is described in the section *Call Handling* which precedes this section.



When you are in a video meeting, there are softkeys available to let you request floor, view a list of the other participants, control the far end camera, and do text chatting.

In addition you may adjust display settings.

Request Floor

When requesting floor, your video will be broadcasted in full screen to all other participants in the conference. **Request Floor** is useful when you want to speak or display something in front of all participants.

View a List of the Participants

Although your TANDBERG 150MXP is unable to generate a multisite video meeting (several participants simultaneously) by itself, it may, of course, be part of a multisite meeting. By pressing **Part Names** a list of the other participants will be shown on the screen.

Controlling the Far End Camera

By means of this feature you will be able to control the zoom and presets of the far end camera (the camera in the other end) in addition to move it using your own cursor keys and select video sources. Note that this requires that the far end unit allows Far End camera control and that it has a movable camera. The 150MXP camera is not a movable camera.

Dual Stream Video

Some systems are capable of generating a dual stream video, e.g. to give viewers the option to see a Microsoft® Powerpoint presentation and the video meeting simultaneously. Your 150MXP cannot show two streams simultaneously. However, if the far end sends dual stream your system will show the presentation only. You may press the Selfview key to see what your own camera sees instead of the presentation, but no other options are available.



Snapshot

Other participants may send you a snapshot, e.g. a picture of something during the video meeting. To produce the snapshot on your screen, use the **Snapshot** softkey (which appears whenever there is a snapshot only).

Text Chat

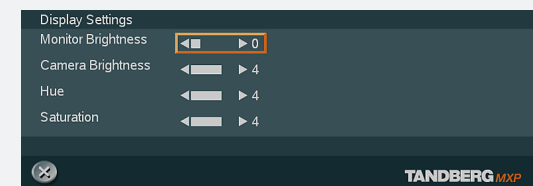
Imagine you want to send over a phone number, an e-mail address, or just inform the far end that their microphone must be switched back on – these are typical applications of the Text Chat feature.

Display Settings

You may adjust the monitor brightness, camera brightness, camera hue, and camera saturation.

Do as follows:

1. Press the **Display Settings** key () to produce the below menu.
2. Use the vertical **Cursor** keys to select a function, and the horizontal **Cursor** keys to adjust a setting.
3. Leave the menu in the usual manner.



Requesting and Releasing Floor

About Requesting Floor

When requesting floor, your video will be broadcasted in full screen to all other participants in a multipart video meeting. Request Floor is useful when you want to speak or display something in front of all participants.

Press the softkey **Release Floor** when you are finished to make the floor available for other participants in the video meeting.

NOTE! This feature is accessible and applies during a multipart video meeting only. Multipart video meetings cannot be initiated by a 150MXP, but your 150MXP may take part in multipart video meetings initiated by other systems.

TIP! Normally, you will retain the floor until you release it yourself. However, in multipart video meetings there may be a chair person with the ability to determine who should have the floor and therefore also with the power to give the floor to someone else than you.

Requesting and Releasing Floor

- 1 In a multipart video meeting, press the softkey **Request Floor**.



- 2 The **Selfview** icon will now indicate that the floor is yours.



The leftmost softkey will now change to **Release Floor**.

- 3 Press **Release Floor** to hand over the floor to someone else.



View Other Participants

About View Participant

In a multipart video meeting you may produce a list of the other participants.

- 1 In a multipart video meeting, press the softkey **View Participant**.



- 2 A list of System Names for the other video systems connected will now be produced.



Select this and click **OK** to exit the **View Participant** mode

Far End Camera Control

About Far End Camera Control

This is a feature that lets you pan, tilt, and zoom the far end camera. If far end presets are available you may access these as well, and you may also make use of any video sources that the far end may have at its disposal.

This feature requires a movable camera in the far end – i.e. communication between two 150MXP units will not provide far end camera control.

This feature is not accessible in multipart video meetings.

About Camera Presets

The far end may use camera presets to easily vary between pre-defined camera angles in their own end. Thus they eliminate the need to move their camera about in a manual way.

Your 150MXP may get access to these settings. If no presets have been stored and you try to access far end presets nothing will happen.

1 In a point-to-point video meeting, press the softkey **Far End**.



2 The softkeys will now change to show the far end control features.



Move **Zoom** **Presets** **Video Source** **Back**

Back lets you exit this menu any time.
Video source is explained overleaf.

3 Press the **Move** softkey to gain pan control of the far end camera.



Use the **Cursor** keys to pan (move) the far end camera.



Press **OK** when done.

4 Press the **Zoom** softkey to gain zoom control of the far end camera.



Use the vertical **Cursor** keys to pan (move) the far end camera.



Press **OK** when done.

5 Press the **Presets** softkey to utilize the far end presets.



Use the Numerical keypad 0–9 to select far end presets.



Press **OK** when done.

About Far End Video Sources

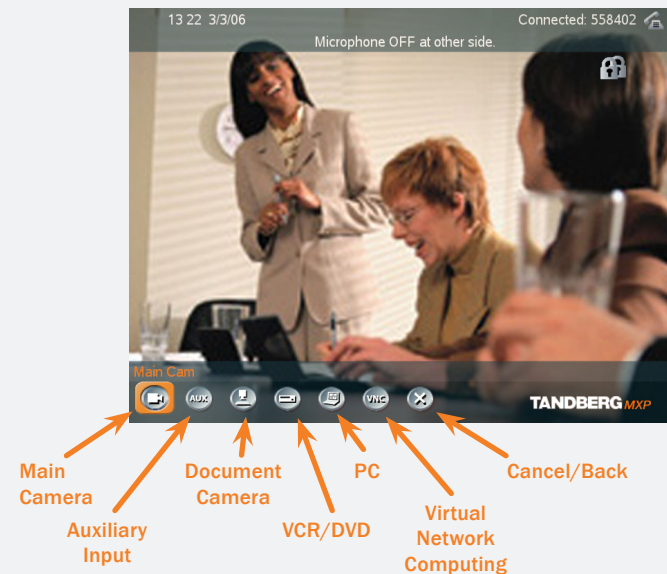
The far end system may have external video sources connected, such as Document camera, a VCR or DVD, a PC, and/or a PC connected via a Virtual Network Computing. In addition there may be an auxiliary input available. Through the Far End Video Source control you may get access to all these sources.

Note that this feature does not apply to multipart video meetings.

- 1** Press the **Video Source** softkey to produce the far end video sources.



- 2** Use the **Cursor keys** (⬅️ ➡️) to navigate to the video source to be selected and click **OK** (⏹️).



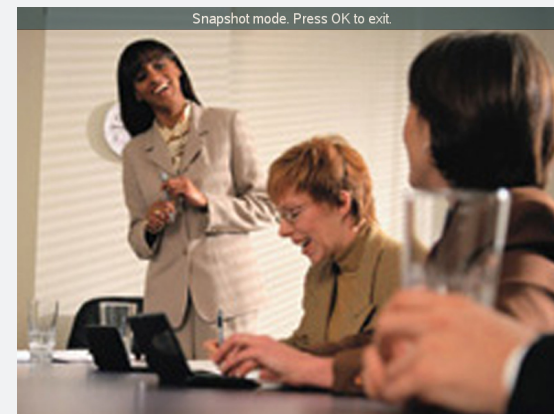
- 3** Select **Cancel** or **Main Camera** to go back to normal display mode.

You can receive snapshots to your 150MXP. Once viewed and discarded it cannot be recalled.

- 1 In a multipart video meeting, press the **Snapshot** softkey when not ghosted.



- 2 View the snapshot, press OK to return to normal display.



About Text Chatting

You may use your 150MXP to send and receive text messages using the chatting function available.

All you need is to select the Text Chat function and use the keypad as you would when sending text messages (SMS) using your cellular phone.

NOTE! This will not work unless the far side **a)** supports text chat and **b)** has activated that feature.

Text chatting does not apply to multipart video meetings.

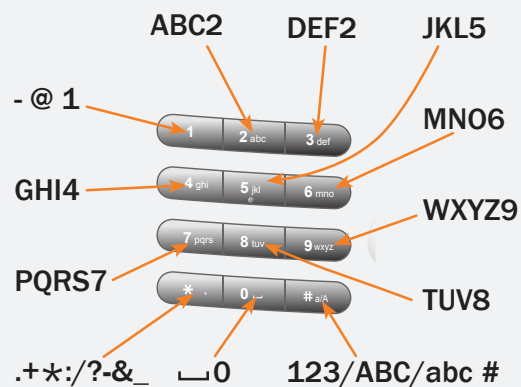
- 1 Press the **Text Chat** softkey to activate the text chatting feature.



- 2 Use the **Numerical keypad** to enter a text message. The text is sent as you type.



Text Chat message

Accessing the alphanumeric characters

Toggle between **ABC** and **abc** mode by pressing the **#** key.

To switch to **123** mode, press the **#** key for one second.

We recommend that you check out the TANDBERG web site regularly for updated versions of this manual:

http://www.tandberg.net/support/documentation.php?p=User_Manuals

Administrator Settings

In order to provide you with the expected high level of TANDBERG video conferencing quality, the unit needs to be configured properly.

This section explains the details of the Administrator Settings options.

Please observe that the Administrator Settings may be password protected. A password will then be needed to gain access to the menus described in this section.



The Administrator Settings Available – an Overview

TANDBERG 150MXP
USER GUIDE

The **Adminstrator Settings** menu lets you configure your TANDBERG 150 MXP. To produce this menu on the screen, press the **Settings** key.



General settings include Language setup, Auto answer settings, Maximum call length settings, Max upstream rate settings, Phone book settings, Default call settings, and Date & time settings.

Audio settings include TTY (Text telephone) settings and Alert tones & Volume settings.

Security settings include Encryption settings, the ability to specify an Administrator's password to prevent access to the setup menus, the ability to specify an IP access password, and the ability to generate a general access code identifying the user for e.g. billing purposes.

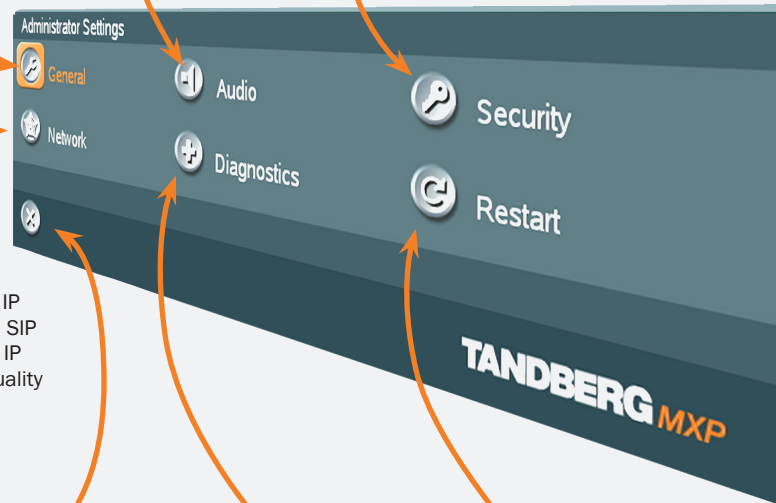
TIP! Password protection. To define a password protecting the Administrator Settings, go to [Password Protection of the Administrator Settings](#)

Network settings include IP settings, H.323 settings, SIP settings, SNMP settings, IP services settings, and Quality of service settings.

Leave the menu by pressing **OK** or **Cancel**, when cursor is positioned here. Otherwise, use **Cancel** to exit menu, undoing any changes at any time.

Diagnostic settings provide an overview of the system, including Call status, Network statistics, and Warnings (whenever applicable).

System restart. Select this menu item to restart the system. You will be prompted to confirm your intentions.

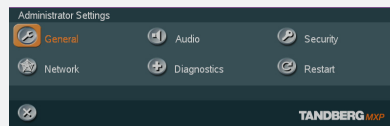


Basic Menu Navigation Rules

- 1 Press the **Settings** key...



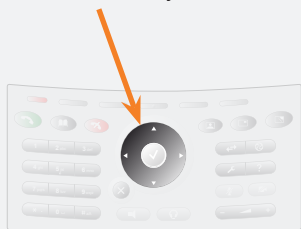
- 2 ...to produce the on-screen menu.



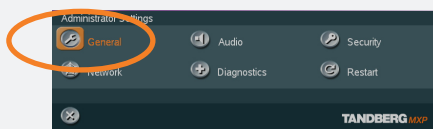
- 3 Press **Cancel** to leave the menu immediately.



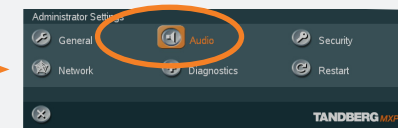
- 4 Otherwise, use the arrow keys to move about the menu...



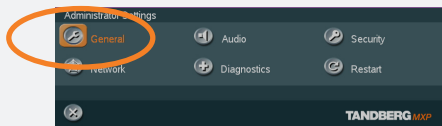
Example: Use the right cursor key to move one step to the right...



The right cursor key



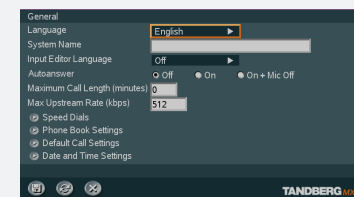
- 1 When a menu item is highlighted...



- 2 press **OK** to enter the associated submenu...

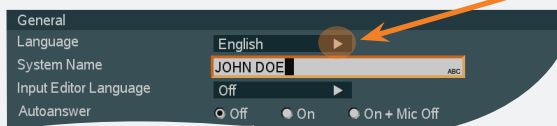


- 3 and the submenu is displayed!



There Are Three Ways to Edit a Setting:

1 To access a submenu...



This little arrow indicates that there are more than meets the eye here. Use the right cursor key of the keypad to produce the submenu of this item (or just press **OK**) and navigate in this submenu in the normal manner.

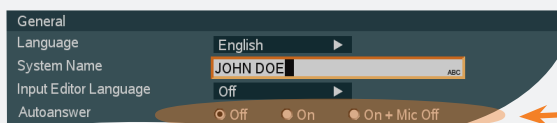
2 To enter alphanumeric information...



This little icon indicates that the system expects alphanumeric text entry. Consequently, the (otherwise) numerical keypad is set to alphanumeric mode.

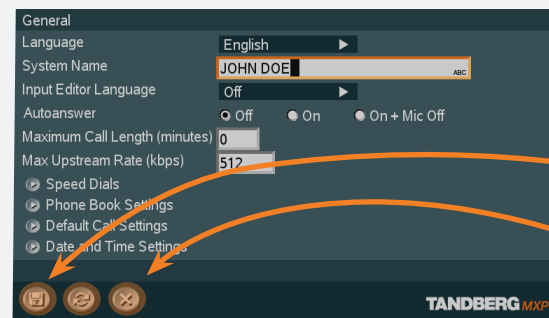
Key in alphanumeric text in the same way as for a cellular phone.

3 To edit a setting using radio buttons...



Radio buttons, use left & right cursor keys to select the appropriate setting.

There Are Three Options When Leaving a Menu:



Navigate to the bottom line and select the appropriate way to exit:

Save changes. Leave the menu putting changes into effect by storing the updated settings.

Cancel. Leave the menu undoing any changes.

Revert to default settings.

The Meaning of the Small Icons Appearing on the Screen



Microphone Off. This indicator is shown when the microphone is turned off. Press the **Mic off** key again to turn the microphone back on.



Secure Conference, AES. This double padlock indicator is shown when AES encryption (Secure Conference) is active.



Privacy. This indicator is shown when the **Privacy** key on the keypad is activated. No camera images are sent from your system when the privacy indicator is displayed. Press the **Privacy** key again to deactivate the feature.



Secure Conference, DES. This padlock indicator is shown when DES encryption (Secure Conference) is active.



Volume Off. This indicator is shown when the volume is turned off. Press **Volume +** to turn the volume back on.



Not Secure Conference. This open padlock indicator is shown during the initialization phase for encryption. During this period the call is not secure.

Password Protection of the Administrator Settings

Password Protection

All Administrator Settings may be password protected by a pin code consisting of up to five digits.

Whenever you press the **Settings** key () you will be prompted to key in this pin code in order to gain access to the Administrator Settings.

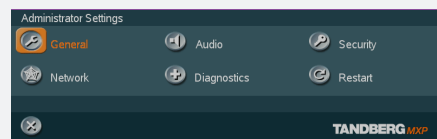
If you perform a [major reset](#) of your 150MXP the password protection will cease to exist. However, so does the rest of your setup as well!

Consequently, a major reset is not a recommendable way of bypassing the password, unless you know how to configure the unit – you may end up *incommunicado*!

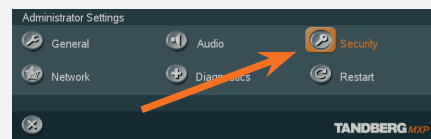
Reconfiguring the unit will not reinstall any password pin code that existed before the major reset was made!

To Set a Password

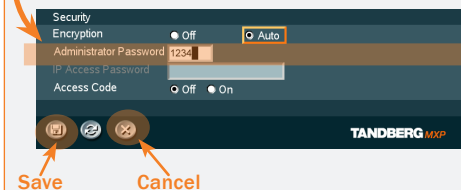
- 1 Press the **Settings** key () to produce the **Administrator Settings** menu.



- 2 Use the **Cursor** keys () to move to **Security** and press the **OK** key () to enter the **Security Settings** menu.



- 3 In the **Security Settings** menu use the **Cursor** keys to navigate down to the **Administrator Password** parameter field and key in the pin code, which will serve as the Administrator's password. The pin code can be up to five digits long.



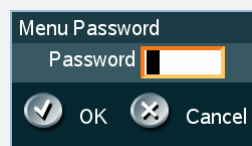
Exit by selecting **Save** to put changes into effect and **Cancel** to leave undoing any changes.

To Clear an Existing Password

- 1 Log in the same way as when gaining access to a password protected Administrator Settings menu.
- 2 Navigate to the **Security Settings** menu, in the same way as setting the password.
- 3 In the **Administrator Password** parameter field, use the **Cancel** key to clear the password and navigate down to the **Save** icon to leave menu putting changes into effect.

To Gain Access to a Password Protected Administrator Settings Menu

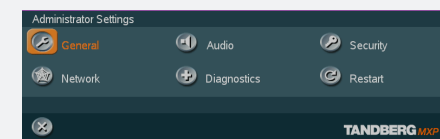
- 1 Press the **Settings** key () to produce the **Administrator Settings** menu. This will prompt you to input the pin code.



- 2 Key in the pin code using the Numerical keypad and hit the **OK** key ().



- 3 The Administrator Settings menu will now be shown on the screen.

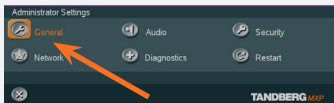


If the wrong pin code is entered, the message **Attention Wrong menu password** will appear on the screen.

General Settings – an Overview

Getting to the General Settings Menu

- 1 Press the **Settings** key () to produce the on-screen menu, if applicable.
- 2 Use the **Cursor** keys () to move to **General**, if applicable.
- 3 Press the **OK** () key to produce the **General Settings** menu.



The General Settings Menu

Speed Dials. You may assign the five soft keys on the keypad to five members of your phone book for immediate access.

Phone Book Settings. The use of Corporate Directories in combination with a management system makes phone book updates easy to do and eliminates the need for entering directory information on each one of the video conferencing units in a company.

Default Call Settings. If you leave Call Settings unchanged when making a call, the system will use the Default Call Settings in the call.

Date and Time Settings. This menu lets you set the date and time correctly, including time zone and daylight saving time, if applicable.

Language. Set the language used in the menus. Choose between English, Deutsch, Français, Italiano, Norsk, Svenska, Español, Português, Русский, Suomi, Chinese, Chinese traditional, Korean, Japanese, and Thai.

System Name identifies the system.

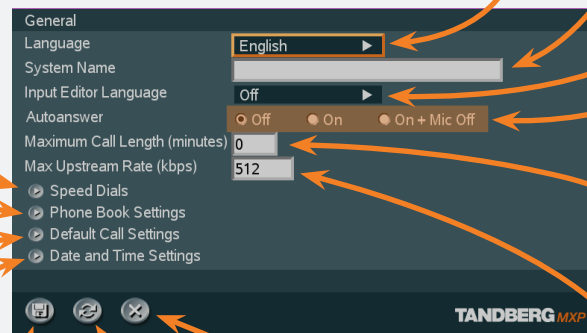
Input editor language. The Input Editor Language may be set to Chinese, Korean or Japanese to enable you to enter Chinese/ Korean/ Japanese characters into input fields like the System Name or Phone Book, using the keypad.

Auto answer. Controls whether incoming calls should be let through automatically or when you answer them manually only.

If set to automatic, you may choose to always disable your microphone when the call is connected. You must then switch it back on manually to let the other side hear you.

Maximum Call Length. If your call exceeds the maximum Call Length, as specified here, the call will disconnect automatically. Range is 0–999 minutes. 0 means disabled feature.

Max. upstream rate. Lets you define a preferred maximum transmitted call rate in kbps. This is to be able to limit the outgoing bandwidth whilst keeping the maximum incoming bandwidth, very handy for home offices with different upstream and downstream rates, typically ADSL.



Select this icon and press **OK** to leave the menu putting changes into effect.

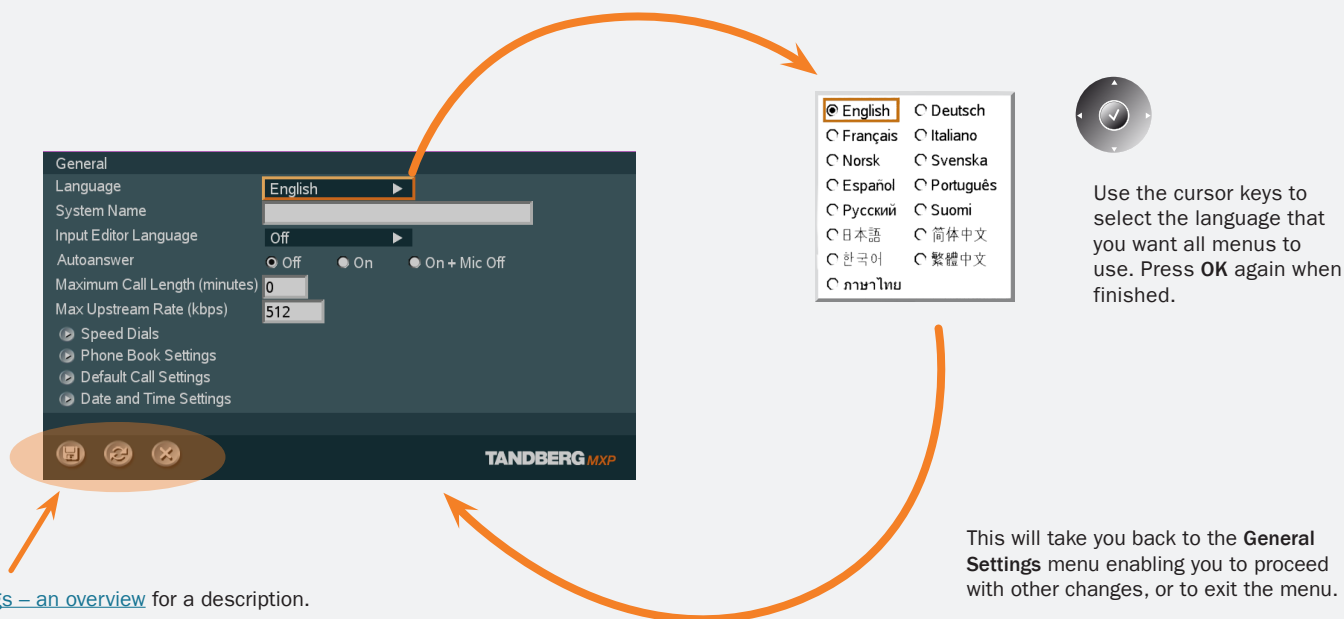
Select this icon and press **OK** to restore the default settings.

Select this icon and press **OK** to leave the menu undoing any changes.

Language

You may change the language used in the menus.

Choose between English, Deutsch, Français, Italiano, Norsk, Svenska, Español, Português, Русский, Suomi, Chinese, Chinese traditional, Korean, Japanese, and Thai.



System Name identifies the system:

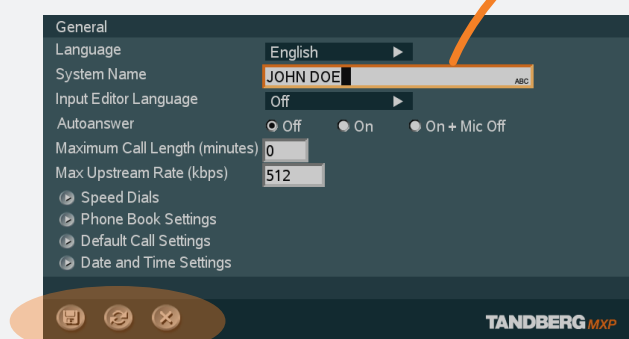
- On the welcome page.
- During an MCU conference call.
- When using the Web-interface.
- When the codec is acting as an SNMP Agent.
- Towards a DHCP server.
- H323 ID. Other systems can call in using this name instead of IP-number/IP-address.
- System Name is blank by default.
- System name can be alphanumeric and up to 50 characters long.

NOTE! If the System Name contains Asian and non-standard ASCII character text input, an International Name using standard ASCII characters only, must be specified as well.

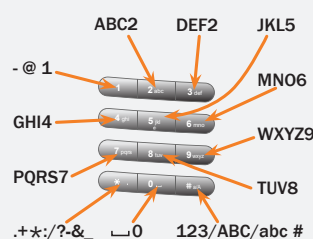
If you set the language to e.g. Korean and input a System Name using Korean characters, a second line allowing you to specify the name using standard ASCII character set will appear.



EXAMPLE: Here we have set **System Language** to **Korean** and entered a System Name using Korean characters. The International Name line immediately appears. We have then set the **System Language** back to **English**, to make the principle clearer to people unfamiliar with the Korean language.



See [General Settings – an overview](#) for a description.



Toggle between **ABC** and **abc** mode by pressing the **#** key. To switch to **123** mode, press the **#** key for one second.

Use the horizontal **Cursor** keys to move text cursor to the left or right.



Use the vertical **Cursor** keys to move to the parameter field above or below the **System Name** field. This will enable you to proceed with other changes, or to exit the menu.

Use **Cancel** to delete a letter/digit.

EXAMPLE: To key in **JOHN DOE**: Press **5** twice, then **6** three times, then **4** twice, and **6** twice. Then press **0** to insert space, followed by **3** once, **6** three times, and finally **3** twice.

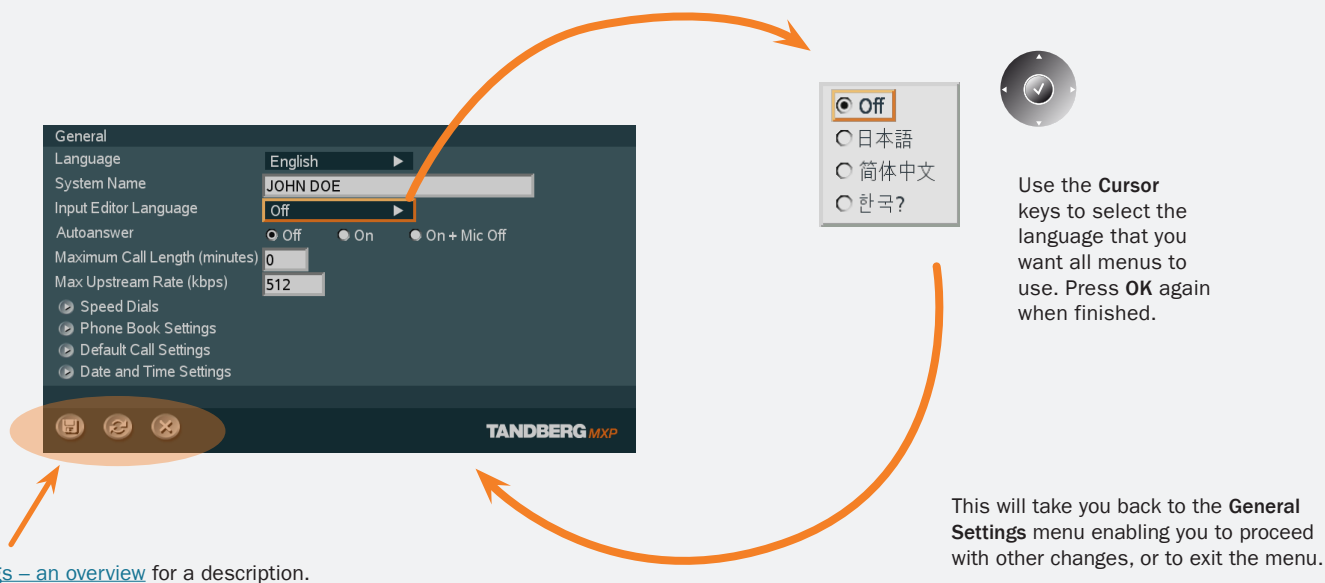
NOTE! The International Name requirement applies to all languages containing characters that are not within the standard ASCII range of characters (A–Z). Consequently this applies to languages like Norwegian, German, Spanish, French etc. as well! The use of non-standard ASCII is detected by the system and the International Name line appears immediately.

Input Editor Language

Input Editor Language

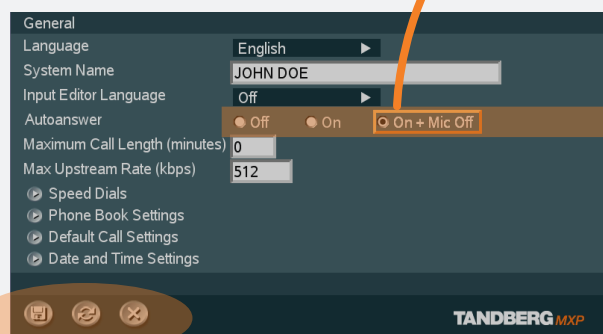
The Input Editor Language may be set to Chinese, Korean or Japanese to enable you to enter Chinese/Korean/ Japanese characters into input fields like the System Name or Phone Book, using the keypad.

NOTE! If the System Name contains Asian and non-Latin character text input, the International Name using Latin characters only, must be specified as well. This is in order to make other systems understand the system name. See [System Name](#) for more on this.



Autoanswer

Controls whether incoming calls should be let through automatically or when you answer them manually only. If set to automatic, you may choose to always disable your microphone when the call is connected. You must then switch it back on manually to let the far end hear you.



See [General Settings – an overview](#) for a description.

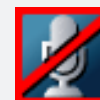
Set to **Auto answer On** to let calls through automatically.

Set to **Auto answer Off** to answer the call manually.

Set to **On + Mic Off** to let the system answer incoming calls automatically and switch the microphone off when the call is connected.

Press **Mic Off** to switch the microphone back on.

Whenever the microphone has been switched off manually, this little icon will appear on the screen.



The **Mic Off** switch is here.



Maximum Call Length

Maximum Call Length

If your call exceeds the maximum Call Length, as specified here, the call will disconnect automatically.

Range is 0–999 minutes. 0 means disabled feature.

The diagram illustrates the navigation process for setting the Maximum Call Length. It features a screenshot of the Tandberg MXP settings menu on the left, a numeric keypad on the right, and a circular arrow indicating the flow of navigation. The settings menu shows the 'Maximum Call Length (minutes)' field set to 0. The numeric keypad is shown with the '0' key highlighted. The circular arrow starts from the 'Maximum Call Length (minutes)' field, goes to the numeric keypad, and then returns to the settings menu.

Use the horizontal **Cursor** keys to move cursor to the left or right inside the parameter field.

Use the **Numerical keypad** to enter a value in the range 0–999 minutes. Set to 0 to disable the feature

Use the vertical **Cursor** keys to move to the parameter field above or below the current parameter field. This will enable you to proceed with other changes, or to exit the menu.

Use **Cancel** to delete a digit.

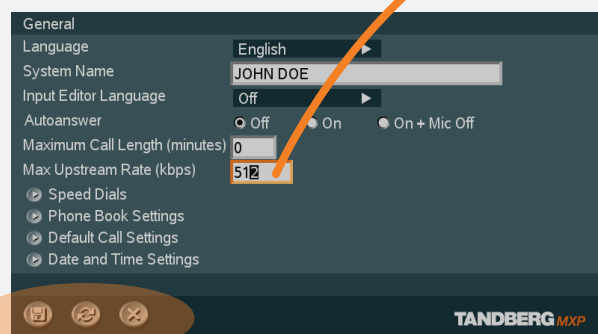
See [General Settings – an overview](#) for a description.

Maximum Upstream Rate

Maximum Upstream Rate

Lets you define a preferred maximum transmitted call rate in kbps. This is to be able to limit the outgoing bandwidth whilst keeping the maximum incoming bandwidth, especially useful for home offices with different upstream and downstream rates, typically ADSL.

Note that maximum upstream rate for the system is 512 kbps.



Use the horizontal **Cursor** keys to move cursor to the left or right inside the parameter field.

Use the **Numerical keypad** to enter a value in the range up to 512 kbps.

Use the vertical **Cursor** keys to move to the parameter field above or below the current parameter field. This will enable you to proceed with other changes, or to exit the menu.

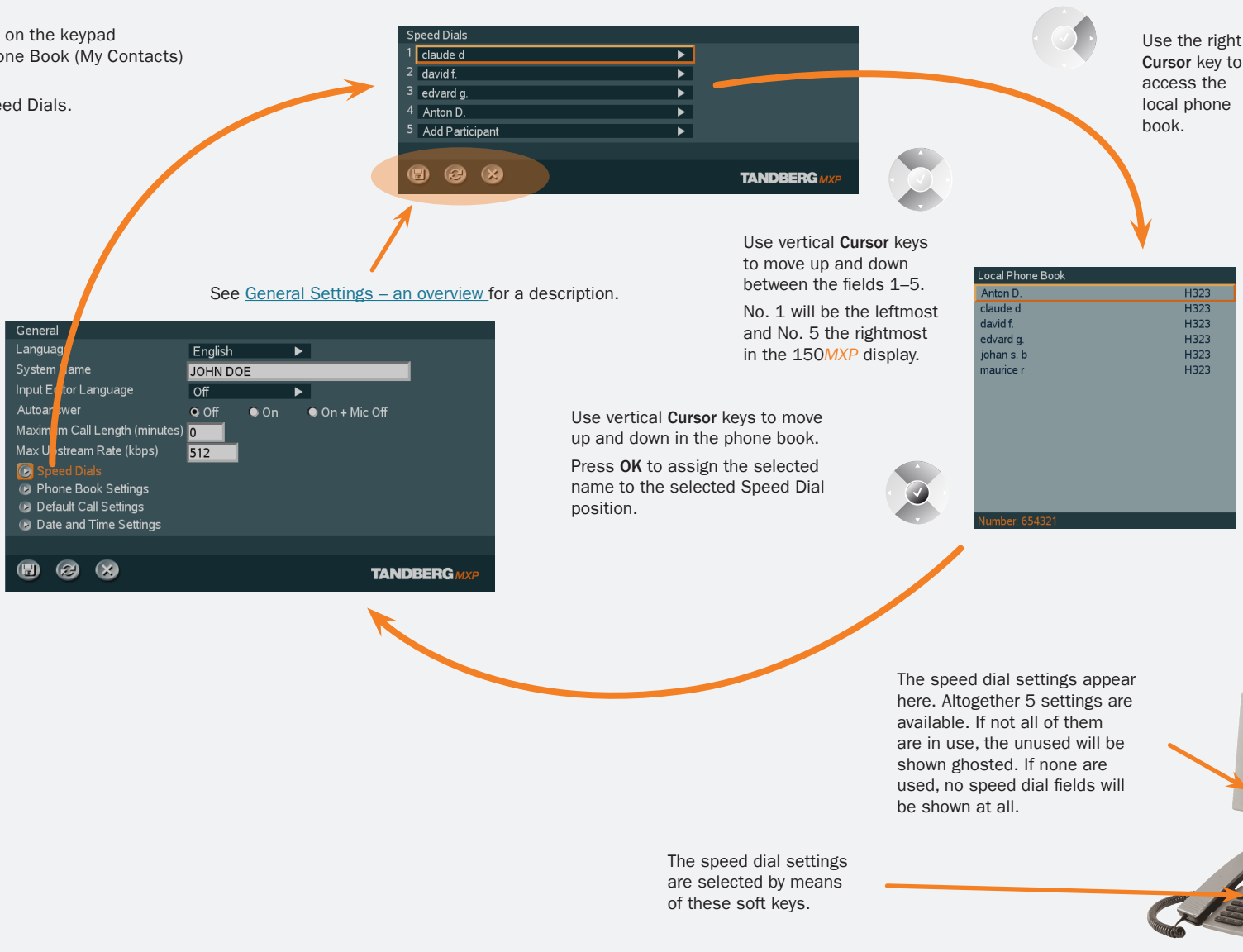
Use **Cancel** to delete a digit.

See [General Settings – an overview](#) for a description.

About Speed Dials

You may assign the five soft keys on the keypad to five members of your Local Phone Book (My Contacts) for immediate access.

This presets feature is called Speed Dials.



Phone Book Settings

Phone Book Settings

The use of Corporate Directories in combination with a management system makes phone book updates easy to do and eliminates the need for entering directory information on each one of the video meeting units in a company.

Corporate Directory. When set to **On**, the Corporate Directory is available in the menu. When set to **Off**, the Corporate Directory is hidden from the menu and unavailable to users.

IP address. Enter the IP address of the management system that provides the Phone Book.



See [General Settings – an overview](#) for a description.

Path. This is the path to the corporate phone book, typically supplied by a management system.

In addition to – or in lieu of – a corporate phone book, you may have your own phone book stored locally. This phone book is called My Contacts. Read more about the use of the Phone book and My Contacts in [Phone Book Features](#) in the *Call Handling* section of this User Guide.

Default Call Settings

Default Call Settings

If you leave Call Settings unchanged when making a call, the system will use the Default Call Settings in the call.

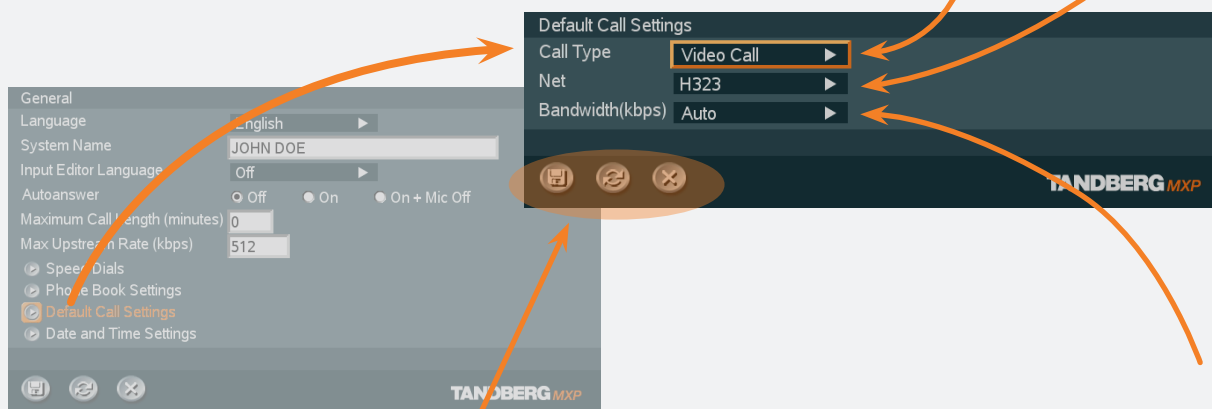
See also [Adjusting the Call Settings](#) in the *Call Handling* section of this User Guide for more.

Call Type. Can be set to Video Call or Telephone Call. If Call Type is set to **Telephone Call** or the **Place Telephone Call** icon is selected when making a call, the call will be set up as a telephone call. In all other cases the call will be set up as a video call.

Network. Options are **H.323** and **SIP**. If a gatekeeper is present, it is possible to place IP-calls using “telephone-style” numbers, e.g. an E.164 alias, according to the numbering plan implemented in the gatekeeper. The gatekeeper will then translate the dialed number into an IP-address, see [H.323 Settings](#) for more on gatekeepers.

Select **H.323** to ensure that the call is set up as an H.323 call.

Select **SIP** to ensure that the call is set up as a SIP call.



See [General Settings – an overview](#) for a description.

Bandwidth. Determines the quality of the video picture. When set to **Auto** the system will establish a connection using a proper bandwidth for the call, typically 384 kbps for IP calls.

When set to **Max** the system will set up the call with maximum bandwidth depending on the selected network.

Date and Time Settings

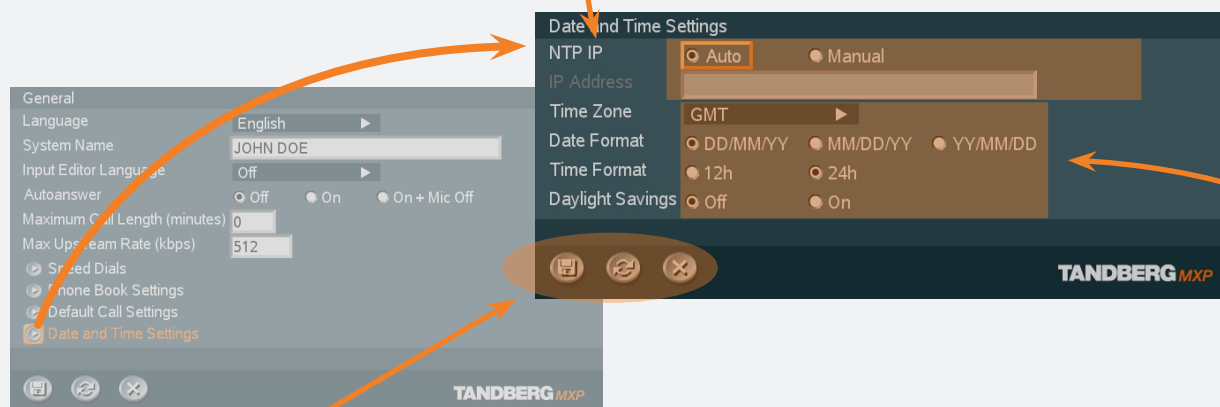
This menu lets you set the date and time correctly, including time zone and daylight saving time, if applicable.

Network Time Protocol settings are also included in this menu.

NTP IP. The Network Time Protocol (NTP) is used to synchronize the time of the system to a reference time server. The NTP IP setting holds the IP address to a time source where the system can get the exact time. The system will use the time to timestamp messages transmitted to Gatekeepers or Border Controllers requiring H.235 authentication.

The interval between time queries will vary with the difference between the unit's own time setting and the one obtained through the query. Larger differences will decrease the interval between the queries, while smaller differences will increase the interval.

When set to **Auto**, the system will use the **IP address** obtained from DHCP or similar to obtain the time stamp. When set to **Manual**, the IP address specified will be used.

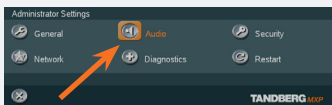


See [General Settings – an overview](#) for a description.

Time Zone, Date Format, Time Format and Daylight Saving Time. Use these options to set date and time as required in your region.

Getting to the Audio Settings Menu

- 1 Press the **Settings** key () to produce the on-screen menu, if applicable.
- 2 Use the **Cursor** keys () to move to **Audio**, if applicable.
- 3 Press the **OK** () key to produce the **Audio Settings** menu.



Audio Settings

This menu lets you set alert tones and configure the unit to be used with TTY (Text telephone)

 The main 'Audio' settings menu is shown. It includes options for TTY (On/Off), Alert Tones & Volume, and a list of alert tones. Annotations with orange arrows point to various features:

- An arrow points to the 'On' button for TTY, with text: 'Set TTY to On to enable use of TTY.'
- An arrow points to the 'Alert Tones & Volume' section, with text: 'See [General Settings – an overview](#) for a description.'
- An arrow points to the 'Video Call Alert Tone' and 'Telephone Alert Tone' dropdowns, with text: 'Alert Tones and Volume. To make it easy to distinguish between incoming video calls and ordinary telephone calls, we recommend the use of different ringing tones for video and telephone calls.'
- An arrow points to the 'Alert Volume' slider, with text: 'Alert Volume. Set the volume of the Alert signals.'
- An arrow points to the 'Key Tones' On/Off buttons, with text: 'Key Tones. To let the unit produce a sound every time a key is pressed, set Key Tones to On.'
- An arrow points to the 'Alert Speaker' On/Off buttons, with text: 'Alert Speaker. Set Alert speaker to Off to hear no alert tones when receiving incoming calls.'
- An arrow points to the list of alert tones, with text: 'Use the vertical **Cursor** keys to move up and down in the Alert tone list. Press **OK** to listen to the alert tone selected. To stop playing the alert tone, use the vertical cursor keys to move away from the menu. Upon leaving the entire menu, you will be prompted to confirm any changes you may have made.'

Set TTY to On to enable use of TTY.

Using TTY. You may hook up a TTY (Text telephone) to the 150MXP. The TTY is a device allowing hearing- or speech impaired people to communicate by typing and reading messages. A successful communication requires a TTY at both ends. To use a TTY, type the message to be sent on the TTY keyboard. As you type the message is sent over the phone line, just like your voice would be transmitted if you were talking. You can read the other person's response on the text display of the TTY.



Connect the TTY to the 2.5mm jack socket.

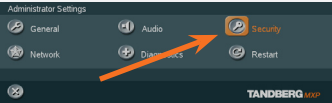
Key Tones. To let the unit produce a sound every time a key is pressed, set Key Tones to On.

Alert Speaker. Set Alert speaker to Off to hear no alert tones when receiving incoming calls

Alert Volume. Set the volume of the Alert signals.

Use the vertical **Cursor** keys to move up and down in the Alert tone list. Press **OK** to listen to the alert tone selected. To stop playing the alert tone, use the vertical cursor keys to move away from the menu. Upon leaving the entire menu, you will be prompted to confirm any changes you may have made.

Getting to the Security Settings Menu

- 1 Press the **Settings** key () to produce the on-screen menu, if applicable.
 - 2 Use the **Cursor** keys () to move to **Security**, if applicable.
- 
- 3 Press the **OK** () key to produce the **Security Settings** menu.

Security Settings

The Security Settings menu lets you set the encryption mode and administrator passwords.

Encryption. Your TANDBERG 150MXP supports AES and DES encryption.

Off: No encryption will be applied to the video call.

Auto: If the far end supports AES, AES encryption will be applied to the video call.

If the far end supports DES, but no AES, DES will be applied to the video call.

If the far end fails to support encryption, no encryption attempts will be made and the call will run unencrypted.

These icons appear to keep you informed about the encryption level of an ongoing video call:



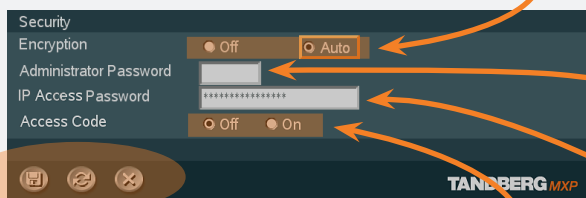
Secure Conference, AES. This double padlock indicator is shown when AES encryption (Secure Conference) is active.



Secure Conference, DES. This padlock indicator is shown when DES encryption (Secure Conference) is active.



Not Secure Conference. This open padlock indicator is shown during the initialization phase for encryption. During this period the call is not secure.



See [General Settings – an overview](#) for a description.

Administrator Password. Access to the Administrator Settings menus can be restricted by an up to five digit pin code acting as a password protecting the settings from unauthorized alterations. How to use the password feature is outlined in [Password Protection of the Administrator Settings](#) in this section of the TANDBERG 150MXP User Guide.

Access Code. Access Code applications are two-fold; call restrictions and billing opportunities.

Call restrictions may be applied by installing a file of valid access codes that must be entered to permit calls to be made. This installation is typically made from TMS (TANDBERG Management Suite – available separately).

Billing opportunities. Assume that an access code is needed whenever you make a call. Your company may have different access codes for the different clients of your company.

Then, the access code used may be picked up by TMS to generate statistics on who is calling whom, when, and for how long time.

This information may later form the basis for billing clients or departments. Observe that in this case there will be no strict need for installing an Access Code file on your system – TMS will still have access to it.

Of course, the two may be combined to form a *billing system with call restrictions*. This will then become a system that acts as forced billing.

Access Codes can be up to 16 characters long. Of course, the two may be combined to form a *billing system with call restrictions* (a system that acts as forced billing).

See also [Access Codes](#) in the Call Handling section of this User Guide.

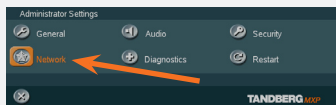
IP Access Password. Your TANDBERG 150MXP may be accessed from remote through Telnet, FTP or HTTP/HTTPS.

You may want to prevent unauthorized access through the use of an IP access password. The default password inserted by the factory is TANDBERG (caps only). To change the password, clear the current password by means of the **Cancel** key () and key in a new one.

Network Settings – an Overview

Getting to the Network Settings Menu

- 1 Press the **Settings** key () to produce the on-screen menu, if applicable.
- 2 Use the **Cursor** keys () to move to **Network**, if applicable.
- 3 Press the **OK** () key to produce the **Network Settings** menu.



Network Settings

IP settings include protocol settings, IP assignment (DHCP/Static), Ethernet speed, DNS settings etc.

H323 Settings. Lets you specify whether to use a Gatekeeper, a Call Manger or Direct H.323 calls and to specify corresponding settings when used with a Gatekeeper or a Call Manager.

SIP Settings. Define whether to enable or disable incoming and outgoing SIP calls.

SNMP (Simple Network Management Protocol, SNMP Ver 1) is used for monitoring and configuring of different entities in a network. The system's SNMP Agent responds to requests from SNMP Managers (a PC program etc.). SNMP traps are generated by the agent to inform the manager about important events.

IP Services. Includes the NTP time server address from which the system can get updated time information.

Quality of Service. Used to define which priority audio, video, data and signaling should have in the network.

IEEE 802.1X. The system may be connected to an IEEE 802.1x LAN network. Supported 802.1x protocols are EAP-MD5, EAP-PEAP and EAP-TTLS.



IP-address. IP-address defines the network address of the codec. This address is used in static mode only. In DHCP-mode, the assigned IP-address can be found on the Welcome Menu.

IP-subnet mask. IP-subnet mask defines the type of network. This address is only used in static mode. Your LAN administrator will provide the correct value for this field.

Gateway. When using DHCP the default gateway will be set automatically. If the LAN utilises static IP addresses, IP address, subnet mask, and default gateway must be specified by the LAN administrator.

IPv4. IP version 4 supported.

IPv6. IP version 6 supported. IP Address, IP Subnet Mask and Gateway will be disabled.

Both. Both IP version 4 and IP version 6 supported.

IP-assignment

DHCP (Dynamic Host Configuration Protocol) can be selected when a DHCP server is present.

For **IPv6**, DHCP is used for NTP / DNS Server Addresses. DHCP IP-address, IP-subnet mask and Gateway are not used because the DHCP server assigns these parameters.

Static The system's IP-address, IP-subnet mask and Gateway must be specified in the IPaddress field.

Ethernet Speed

Auto The system will auto-detect the speed/duplex on the LAN.

10/Half The system will connect to the LAN using 10Mbps speed/Half Duplex.

10/Full 10 Mbps speed/Full Duplex.

100/Half 100 Mbps speed/Half Duplex.

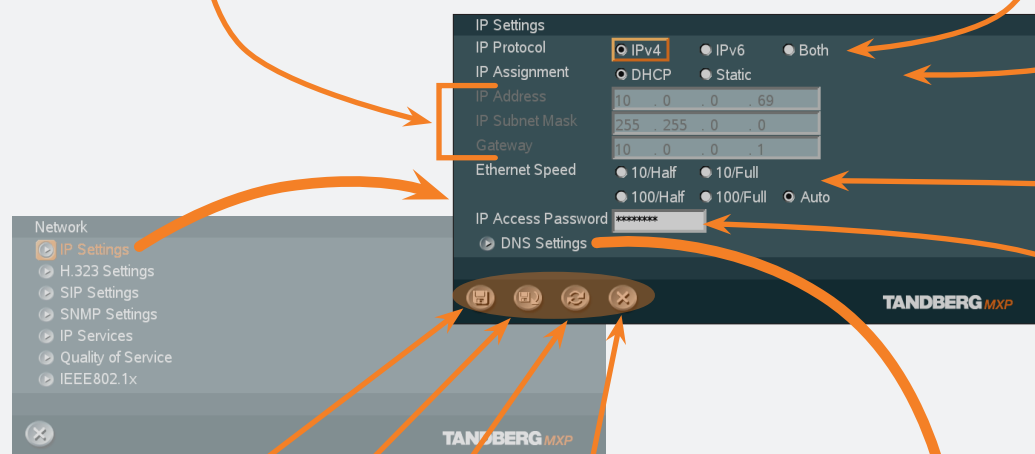
100/Full 100 Mbps speed/Full Duplex.

IP Access Password. By setting an IP Access Password on the system, all access to the system using IP (Telnet, FTP and WEB) requires a password. The default IP Access Password is TANDBERG.

DNS Server 1-5. DNS Server defines the network addresses for DNS servers. Up to 5 addresses may be specified. If the network addresses are unknown, please contact your administrator or Internet service Provider.

DNS Domain Name. DNS Domain Name is the default domain name suffix which is added to unqualified names.

Example: DNS Domain Name is example.com, and the name to lookup is videosystem will result in a videosystem.example.com DNS lookup.

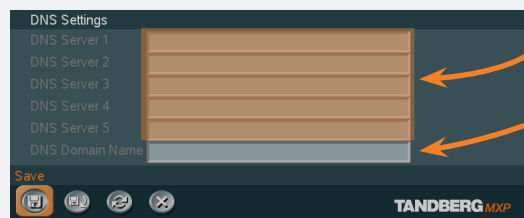


Select this icon and press **OK** to leave the menu putting changes into effect.

Save and Restart. Select this icon and press **OK** to **restart** the system putting changes into effect.

Select this icon and press **OK** to restore the default settings.

Select this icon and press **OK** to leave the menu undoing any changes.



TIP! The system will need to be restarted after making changes to IP Settings. This can be done by selecting the **Save and Restart**. Changes in IP Settings menu will not have any effect until the system is restarted.

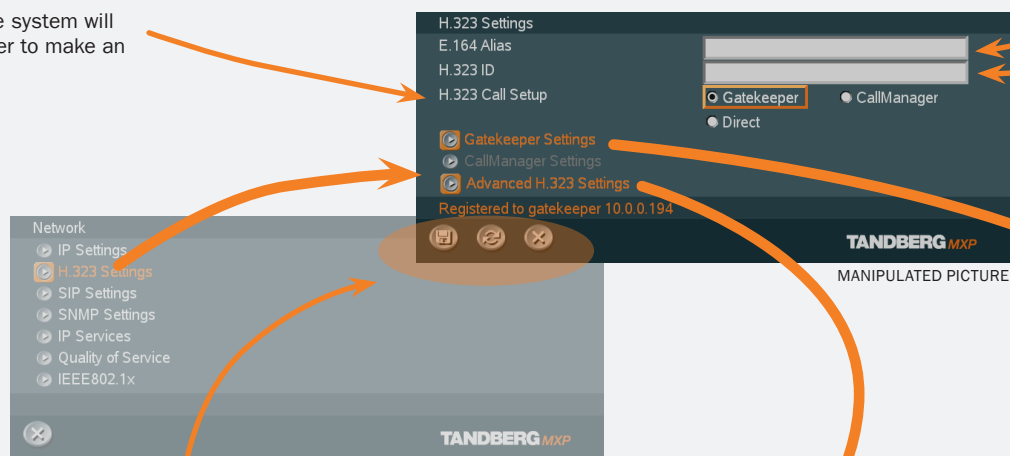
H.323 Settings – Call Setup Using Gatekeeper

E.164 alias. This is the E.164 address of the system. The E.164 address is equivalent to a telephone number, sometimes combined with access codes. Valid characters are 0–9, *, and #. When using a gatekeeper, the system will send a message to the gatekeeper containing both the E.164 address and the H.323 ID of the system.

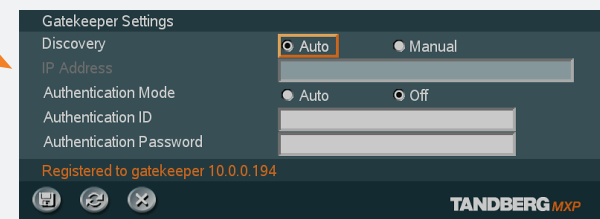
H.323 ID. The H.323 ID of the system may be specified here. If no H.323 ID is entered, the System name will be used.

H323 Call Setup

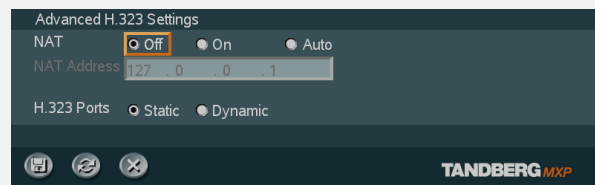
Gatekeeper. The system will use a gatekeeper to make an H.323 call.



See [General Settings – an overview](#) for a description.



See [H.323 Settings – the Gatekeeper Settings](#) for a description.



See [H.323 Settings – Advanced H.323 Settings](#) for a description.

H.323 Settings – the Gatekeeper Settings

NOTE! If your system is part of a TANDBERG Expressway™ firewall traversal solution and is placed outside the firewall, you should register the IP address of your Border Controller as the Gatekeeper IP address and set H.323 Call Setup to Gatekeeper.

Gatekeeper IP Address. This is where you specify the gatekeeper IP-address that is used if you specify H.323 Call Setup: Gatekeeper and Gatekeeper Discovery: Manual.

Gatekeeper Discovery
Auto. The system will automatically try to register to any available gatekeeper. If a gatekeeper responds to the request sent from the codec within 30 seconds this specific gatekeeper will be used. This requires auto discovery on the gatekeeper as well. If no gatekeeper responds, the system will not use a gatekeeper for making H.323 calls and hence an IP-address must be specified manually.
Manual. The system will use a specific gatekeeper identified by Gatekeeper IP-address.

Authentication ID / Authentication Password. The system sends the Authentication ID and Password to a Gatekeeper for authentication. The authentication is a one way authentication from the endpoint system to a Gatekeeper, i.e. the endpoint is authenticated to the Gatekeeper. If the Gatekeeper indicates that no authentication is required, the endpoint will still try to register.

Authentication Mode Auto. If Authentication Mode is set to Auto and the gatekeeper indicates that it requires authentication, the endpoint will automatically try to authenticate itself to the Gatekeeper.

Authentication Mode Off. If Authentication Mode is set to Off the system will not try to authenticate itself to a Gatekeeper, but will still try a normal registration.

See [General Settings – an overview](#) for a description.

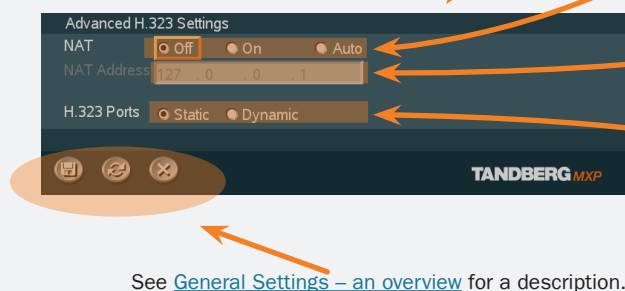
MANIPULATED PICTURE

H.323 Settings – Advanced H.323 Settings

TIP! The Advanced H.323 Settings have effect when supported by your IP infrastructure only.



MANIPULATED PICTURE



See [General Settings – an overview](#) for a description.

NAT, Network Address Translation, is used when a PC and a videoconferencing system are connected to a router with NAT support. NAT support in the videoconferencing system enables proper exchange of audio/video data when connected to an external videoconferencing system (when the IP traffic goes through a NAT router). When NAT is On, the NAT Server Address will be shown in the startup-menu: “My IP Address: 10.0.2.1”.

On. The system will signal the configured “NAT Address” in lieu of its own IP-address within Q.931 and H.245.

Auto. The system will try to determine if the “NAT Address” or the real IP-address should be used within signalling. This has been done to make it possible to place calls to endpoints on the LAN as well as endpoints on the WAN.

NAT Address. This must be the external/global IP-address to the router with NAT support. Packets sent to the router will then be routed to the system. In the router, the following ports must be routed to the system’s IP-address:

Port 1720

Port 5555-5560

Port 2326-2365

Please contact your TANDBERG representative for further information.

H.323 Ports, Static. When selecting static H.323 ports for TCP connections the ports 5555 to 5574 will be used for Q.931 and H.245 respectively.

H.323 Ports, Dynamic. The system will allocate which ports to use when opening a TCP connection.

The reason for doing this is to avoid using the same ports for subsequent calls as some firewalls consider this as a sign of attack.

H.323 Settings – Call Setup Using Call Manager

H323 Call Setup
CallManager. The system will use a CallManager to make a H.323 call.

MANIPULATED PICTURE

See [General Settings – an overview](#) for a description.

CallManager IP. The CallManager IP-address specified here will be used if you specify H.323 Call Setup: CallManager.

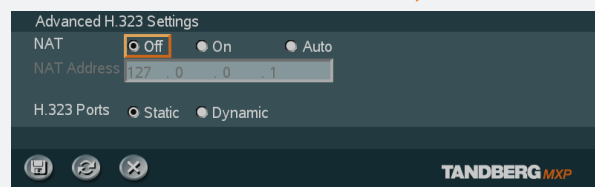
H.323 Settings – Call Setup Using Direct



H323 Call Setup

Direct. An IP-address must be dialled in order to make a H.323 call. The system will not use a gatekeeper or CallManager

See [General Settings – an overview](#) for a description.



See [H.323 Settings – Advanced H.323 Settings](#) for a description.

Display Name. The Display name part of the SIP Address (URI) is normally a full name or system name.

Examples: “Alice Wonderland”
“System 01”

SIP Address. The SIP Address is the SIP URI used to address the system.

Examples: “alice@example.com” “1234”
“1234@example.com”

Server Discovery

Auto. When Auto is selected, the SIP Server address is obtained using Dynamic Host Configuration Protocol (DHCP).

Manual. When Manual is selected, the manually configured SIP Server address will be used.

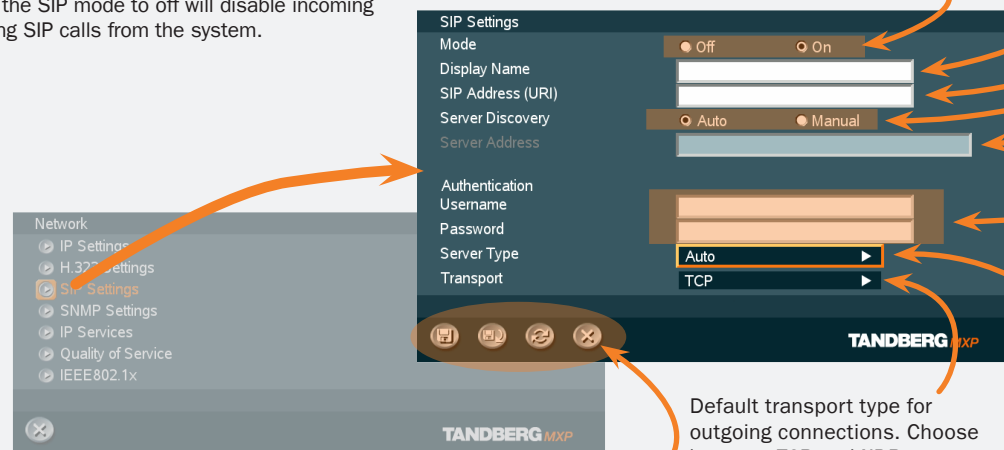
Server Address. The Server Address is the manually configured address for the outbound proxy and registrar. It is possible to use a fully qualified domain name, or an IP address. The default port is 5060 for TCP and UDP, but another one can be provided.

Examples: “sipserver.example.com” “sipserver.example.com:5060” “10.0.0.2” “10.0.0.2:5061”

Mode

On Setting the SIP mode to on will enable the system for incoming and outgoing SIP calls.

Off Setting the SIP mode to off will disable incoming and outgoing SIP calls from the system.



See [IP Settings](#) for a description.

Authentication. User Name. This is the user name part of the credentials used to authenticate toward the SIP Server.

Password. This is the password part of the credentials used to authenticate toward the SIP Server.

Server Type. Available servers are: Auto, Nortel, Microsoft and Experimental.

Media Capabilities supported in SIP

Audio:

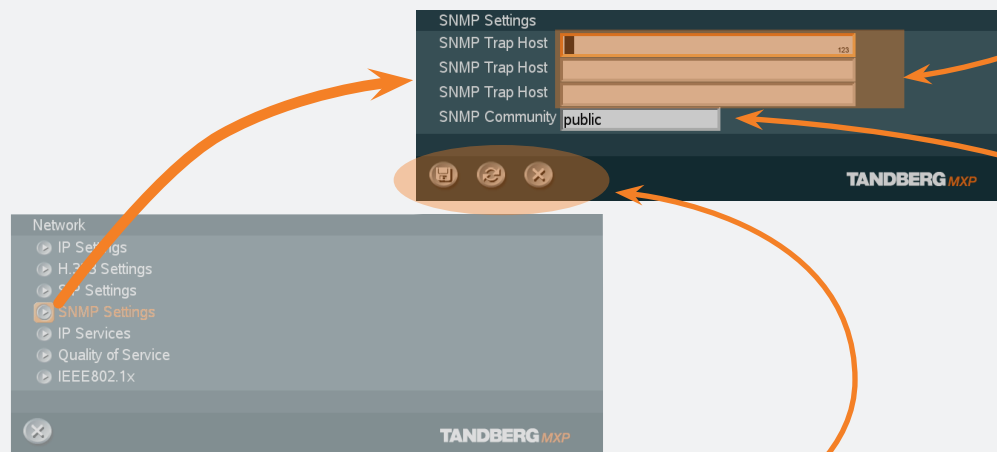
PCMU (G.711 u-law)
PCMA (G.711 a-law)
G.722 64 kbps
G.722.1 24 kbit
G.722.1 32 kbps

Video:

H.261: QCIF 1/30, CIF 1/30
H.263: SQCIF 1/30, QCIF 1/30, CIF 1/30, 4CIF 2/30
H.263++: XGA 4/30, SVGA 3/30, VGA 2/30, SQCIF 1/30, QCIF 1/30, CIF 1/30, 4CIF 2/30
H.264: CIF, W288p

Current RFC's and Drafts supported:

- RFC 3261 SIP: Session Initiation Protocol
- RFC 2327 SDP: Session Description Protocol
- RFC 3264 An Offer/Answer Model with the Session Description Protocol (SDP)
- RFC 3263: Session Initiation Protocol (SIP): Locating SIP Servers – No support for NAPTR records.
- RFC 3311 The Session Initiation Protocol (SIP) UPDATE Method
- RFC 2976 SIP INFO Method
- Draft-levin-mmusic-xml-media-control-03.txt – used for video fast picture update requests
- RFC 3361 Dynamic Host Configuration Protocol (DHCP-for-IPv4) Option for Session Initiation Protocol (SIP) Servers
- RFC 3550 RTP: A Transport Protocol for Real-Time Applications
- RFC 2032 RTP Payload Format for H.261 Video Streams
- Draft-ietf-avt-rfc2032-bis-06.txt – draft for advanced video signaling including resolution and mpi.
- RFC 2190 RTP Payload Format for H.263 Video Streams
- RFC 2429 RTP Payload Format for the 1998 Version of ITU-T Rec. H.263 Video (H.263+)
- Draft-ietf-avt-rfc2429-bis-05.txt – draft for advanced video signaling including resolution, mpi, annexes and custom formats.
- RFC 3047 RTP Payload Format for ITU-T Recommendation G.722.1
- RFC3581 An Extension to the Session Initiation Protocol (SIP) for Symmetric Response Routing
- RFC3984 RTP Payload Format for H.264 Video
- RFC3016 RTP Payload Format for MPEG-4 Audio/Visual Streams

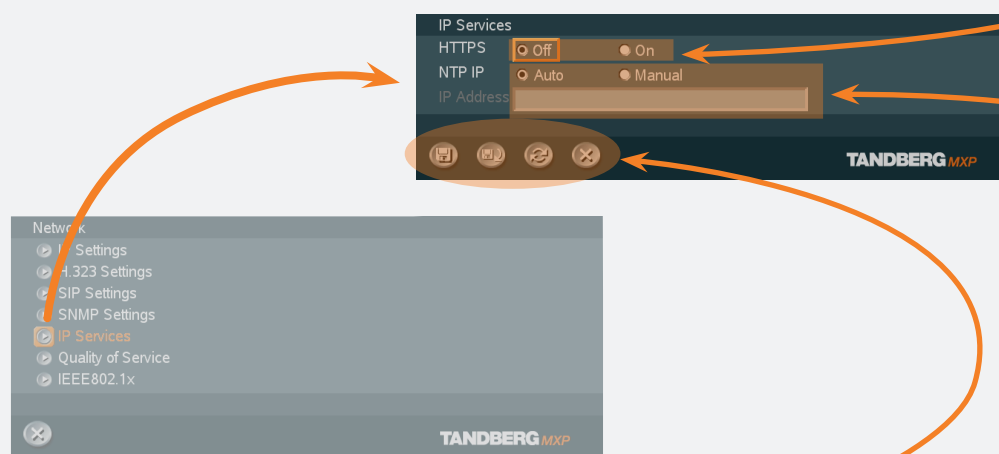


SNMP Trap Host identifies the IP-address of the SNMP manager. SNMP (Simple Network Management Protocol, SNMP Ver 1) is used for monitoring and configuring of different entities in a network. The system's SNMP Agent responds to requests from SNMP Managers (a PC program etc.). SNMP traps are generated by the agent to inform the manager about important events.

Traps can be sent to multiple SNMP Trap Hosts. Enter the IP address of up to three SNMP managers. All traps will then be sent to the hosts listed.

SNMP Community names are used to authenticate SNMP requests. SNMP requests must have a 'password' in order to receive a response from the SNMP agent in the codec. Note that the SNMP Community name is case sensitive. The default password is `public`.

See [General Settings – an overview](#) for a description.



HTTPS. Set the IP Services HTTPS Server to **On** (default) or **Off**.

If **On**, the system is able to make a secure session to the web server.

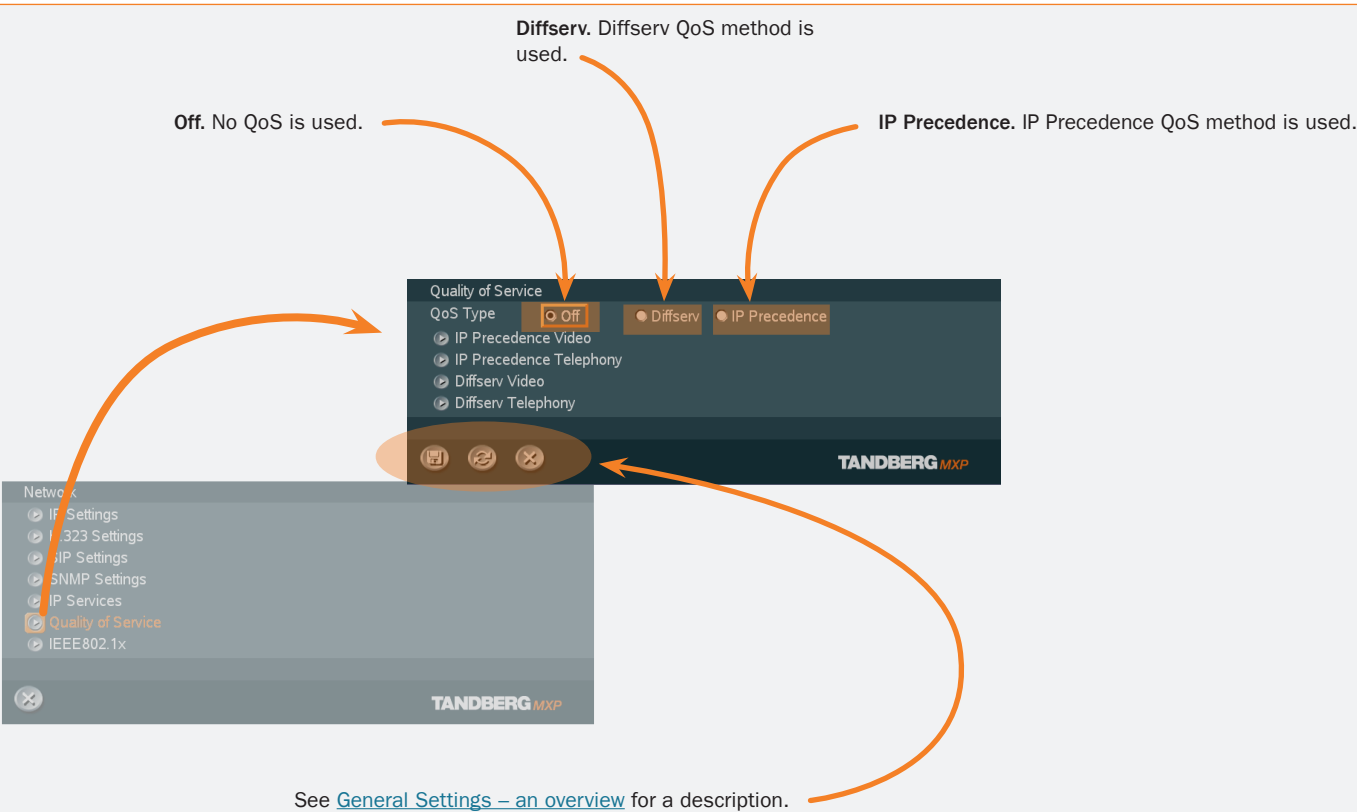
If **Off**, the system will not respond to HTTPS requests.

NTP IP. The Network Time Protocol (NTP) is used to synchronize the time of the system to a reference time server. The NTP IP setting holds the IP address to a time source where the system can get the exact time. The system will use the time to timestamp messages transmitted to Gatekeepers or Border Controllers requiring H.235 authentication. NTP is also used to display local clock and to tag missed calls with date and time.

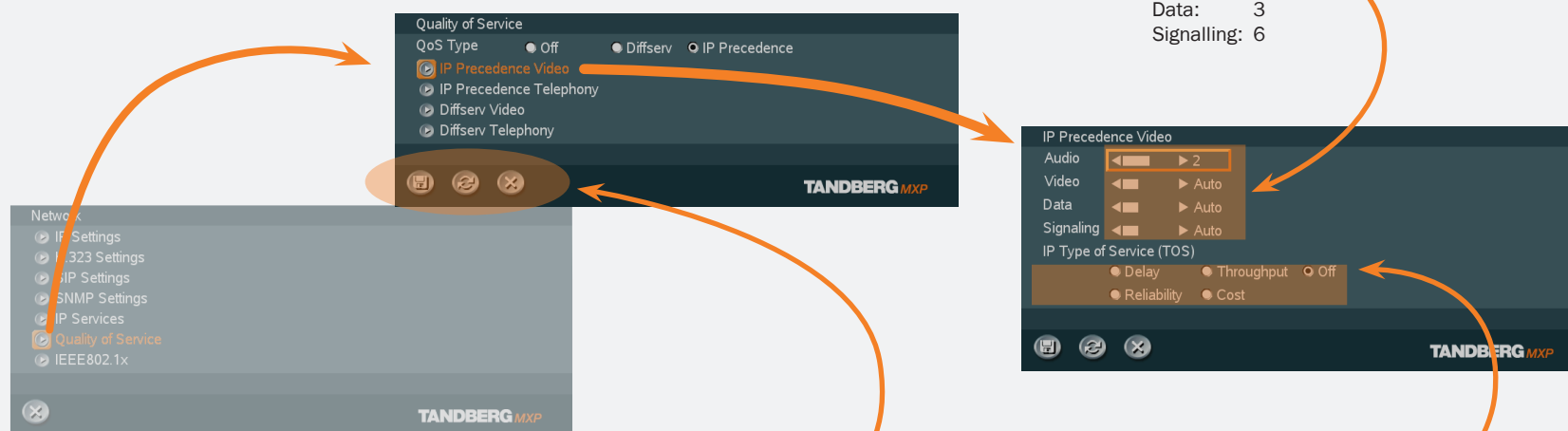
The interval between time queries will vary with the difference between the unit's own time setting and the one obtained through the query. Larger differences will decrease the interval between the queries, while smaller differences will increase the interval.

When set to **Auto**, the system will use the **IP address** obtained from DHCP or similar to obtain the time stamp. When set to **Manual**, the IP address specified will be used.

See [IP Settings](#) for a description.



Quality of Service (QoS) – IP Precedence Video



IP Precedence Video. Used to define which priority audio, video, data and signalling should have in the network. The higher the number, the higher the priority. The priority ranges from 0–7 for each type of packets. Note that 0 is Off.

Auto will provide the following priority:

Audio: 4
Video: 4
Data: 3
Signalling: 6

See [General Settings – an overview](#) for a description.

IP Type of Service (TOS)

This helps a router select a routing path when multiple paths are available.

Delay. Tells the router to minimize the delay.

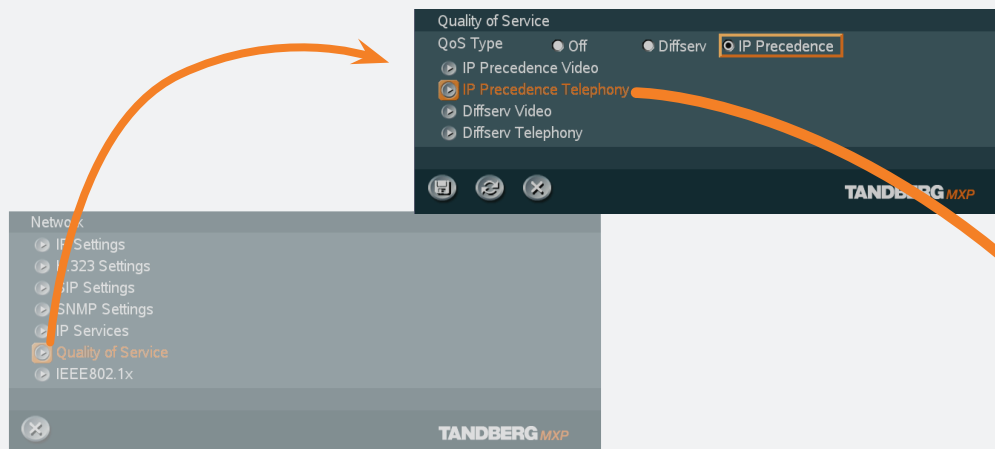
Throughput. Tells the router to maximize the throughput.

Off. TOS disabled

Reliability. Tells the router to maximize the reliability.

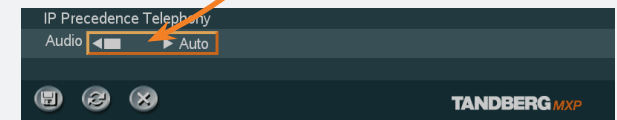
Cost. Tells the router to minimize the cost.

Quality of Service (QoS) – IP Precedence Telephony

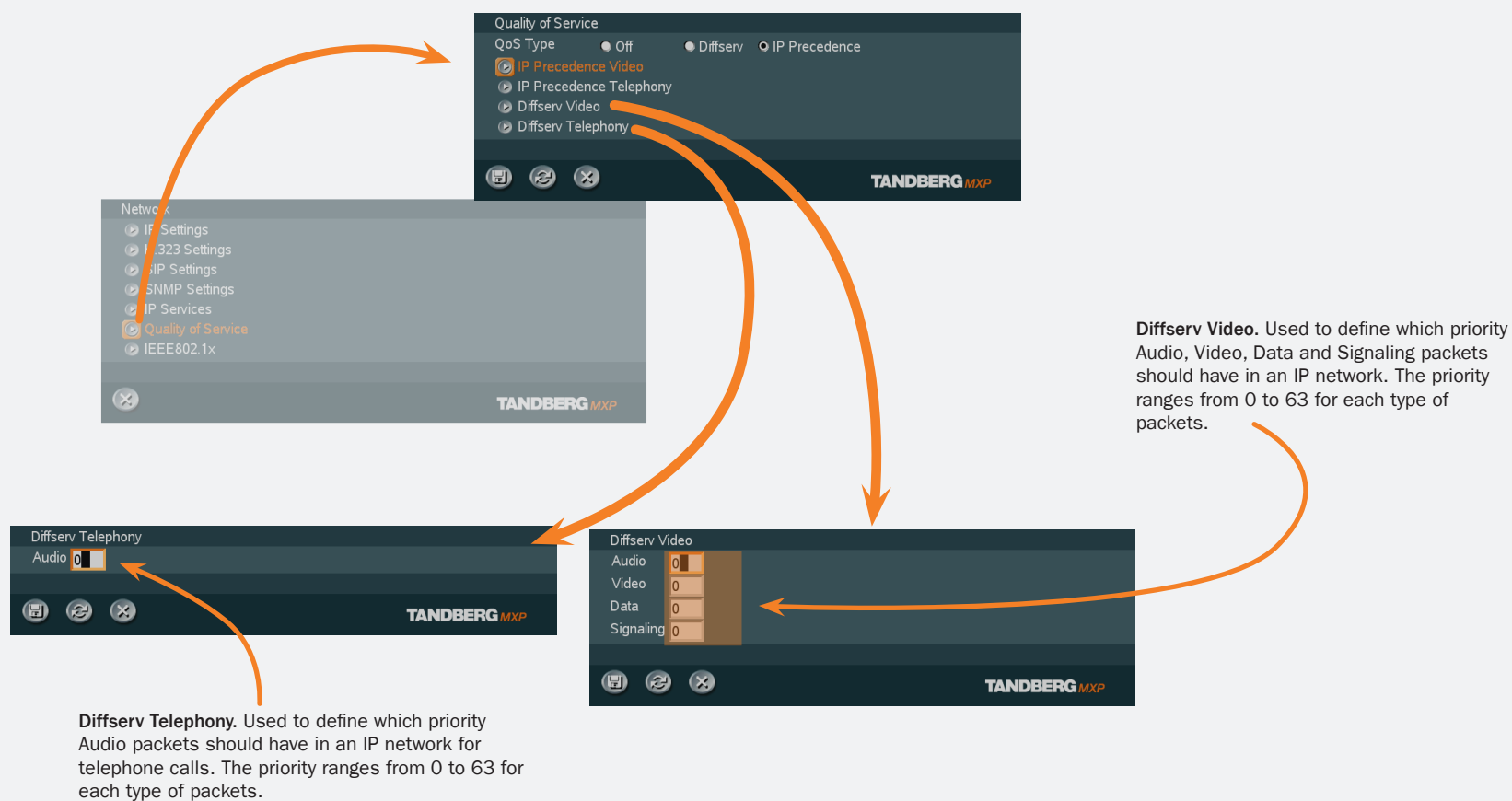


IP Precedence Telephony. Used to define which priority audio should have in the network for telephone calls. The higher the number, the higher the priority. The priority ranges from 0–7 for each type of packets. Note that 0 is Off.

Auto sets Audio to 4



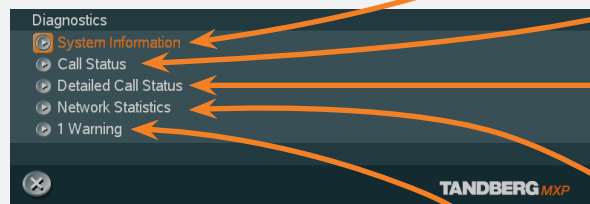
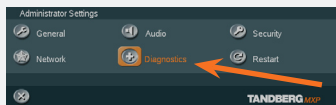
Quality of Service (QoS) – Diffserv Video & Diffserv Telephony



Diagnostics – an Overview

Getting to the Network Settings Menu

- 1 Press the **Settings** key () to produce the on-screen menu, if applicable.
- 2 Use the **Cursor** keys () to move to **Diagnostics**, if applicable.
- 3 Press the **OK** () key to produce the **Diagnostics** menu.



System Information provides system numbers, line status, software version and other useful information.

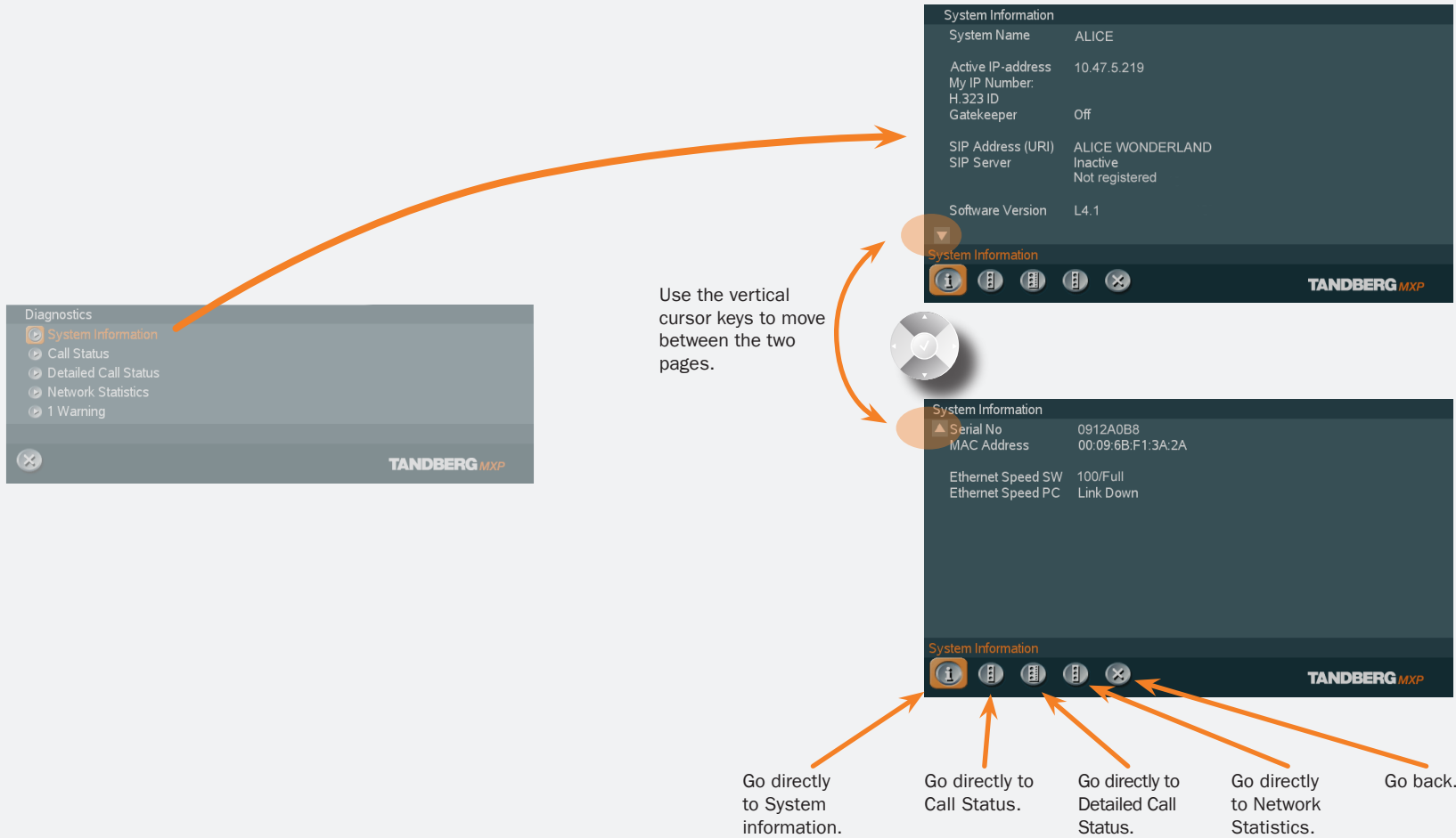
Call Status. Comprehensive information about the call is available through the Call Status window. The menu has two columns, one for transmitted and one for received audio/video information.

Detailed Call Status. Detailed call information on audio/video packet loss and jitter is available through the Detailed Call Status window. The menu has two columns, one for transmitted and one for received audio/video information.

Network Statistics. Detailed information about network traffic.

Warnings registered by the system will appear in the Warnings menu.

System Information provides system numbers, line status, software version and other useful information.



Call Status

Comprehensive information about the call is available through the Call Status window. The menu has two columns, one for transmitted and one for received audio/video information.



See [System Information](#) for details.

Detailed call information on audio/video packet loss and jitter is available through the Detailed Call Status window. The menu has two columns, one for transmitted and one for received audio/video information.



See [System Information](#) for details.

Detailed information about network traffic.

A screenshot of the 'Network Statistics' screen. It displays a table of statistics for SW, PC, and Internal ports. Below the table is a row of five icons: an information icon (i), three bar charts, a refresh icon, and a close icon (X). The 'Network Statistics' title is above the icons. The TANDBERG MXP logo is at the bottom right.

Network Statistics			
Switch Port:	SW	PC	Internal
Rx Frames:	00000000	00000000	00000000
Tx Frames:	00000000	00000000	00000000
Rx Broadcasts:	00000000	00000000	00000000
Elapsed Time: 2:05:38			
Port1(SW):	Link Down		
Port2(PC):	Link Down		

See [System Information](#) for details.

Clear Network Statistics.

Go back.

Taking Back-up of the 150MXP Files

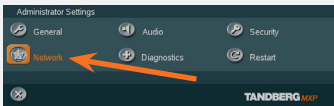
About Back-ups

You may copy the contents of the phone book and the system's configuration files to your PC, either for back-up purposes or for use in other 150MXP systems.

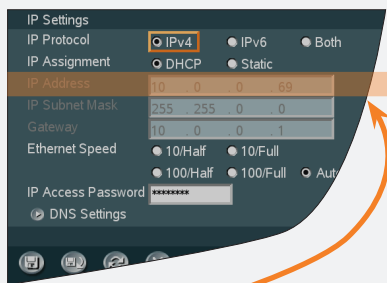
However, back-ups are useful only if you can load them back into the unit. Consequently, this feature may also be used to install certain configuration settings. Centralized systems like TMS (TANDBERG Management Suite) may utilize this to reset the system to default e.g. every evening. This is described overleaf.

- 1 On the 150MXP press the **Settings** key () to produce the on-screen menu.

- 2 Use the **Cursor** keys () to move to **Network**.

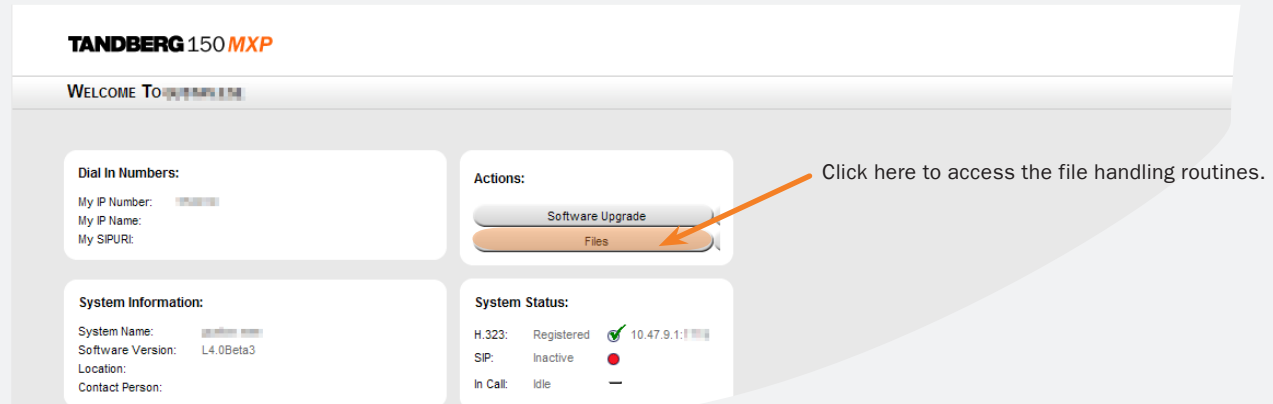


- 3 Press the **OK** () key to produce the **Network Settings** menu.

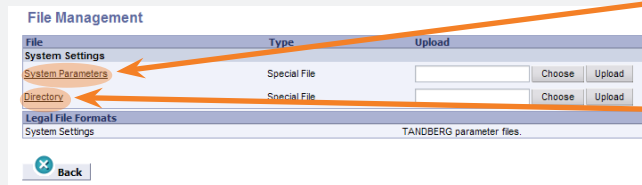


Locate the **IP address** of your system.

- 4 In your internet browser type in the IP number of your TANDBERG system. This will produce the below display.



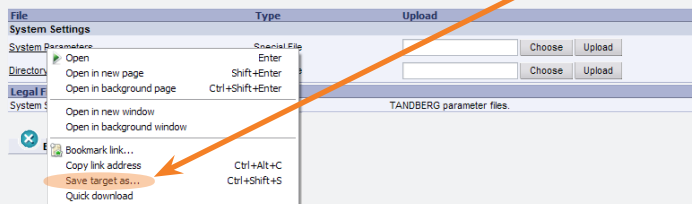
- 5 This will produce the following display:



All system parameters
(including My Contacts)

Local directory (My Contacts) only

- 6 Right-click on **System Parameters** or **Directory**, select **Save target as...**, and save the file(s) on your PC.



Uploading Files to Your 150MXP

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USER GUIDE

About Uploading

You may upload files from your PC to your 150MXP system.

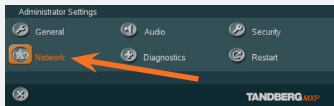
These files could be files that have been backed up earlier i.e. to restore a configuration, or it could be e.g. a revised Company Phone Book.

Resetting the system to default settings every evening is another typical application of this.

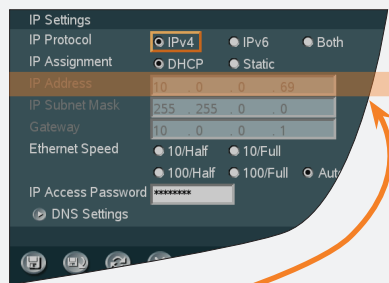
When upgrading the software, you may have taken a back-up of your local directory, just in case...

- 1 On the 150MXP press the **Settings** key () to produce the on-screen menu.

- 2 Use the **Cursor** keys () to move to **Network**.

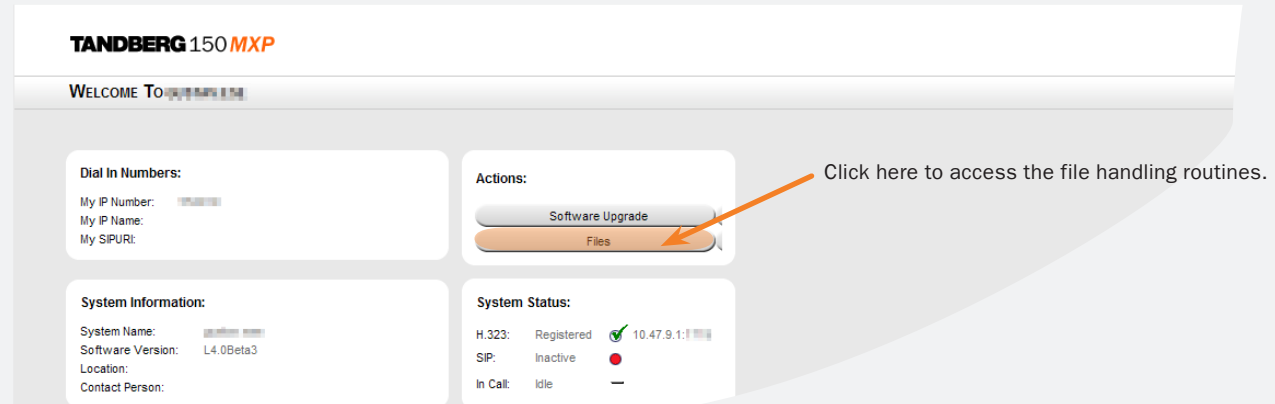


- 3 Press the **OK** () key to produce the **Network Settings** menu.

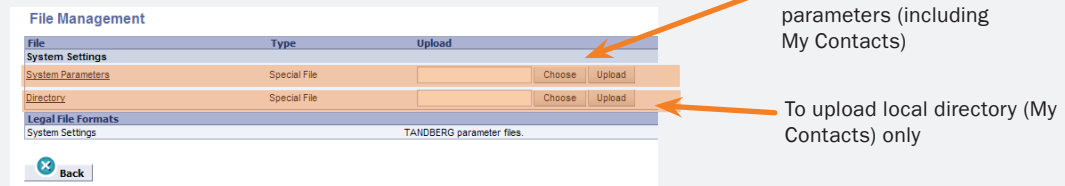


Locate the **IP address** of your system.

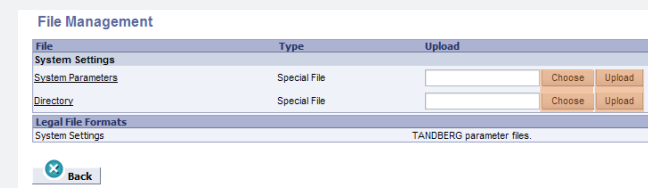
- 4 In your internet browser type in the IP number of your TANDBERG system. This will produce the below display.



- 5 This will produce the following display:



- 6 Click **Choose** on System Parameters or Directory (depending on what you want to upload) and browse for the file. Valid files have the extension **.prm**. Once located click **Upload** to upload the file(s) to the 150MXP system.



Resetting Your 150MXP

TANDBERG 150MXP
USER GUIDE

You may reset the 150MXP to:

- Restore default settings
- Reformat the flash disk
- Swap software images.

What Is Software Image Swapping?

Whenever upgrading your system with new software, you always face a risk (albeit quite unlikely) of installing a malfunctioning version.

To cope with this, the 150MXP retains the old version allowing you to switch back to this if the new fails to work properly.

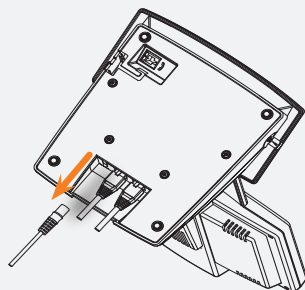
Want to Reset More Than One Function?

To be able to reset more than one function you must repeat the procedure and select a different function to reset, you cannot reset more than one function at the time.

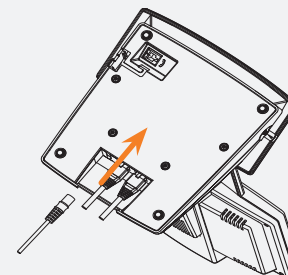
Method 1 Key in ***** , hold down the keys 4 and 6 and then proceed directly to 3 below.

Method 2 Unplug the power to reset the unit.

1 Switch off the unit by removing the power cable.



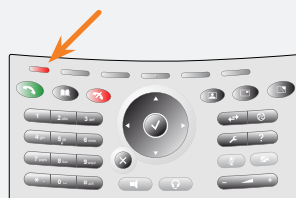
2 Switch the unit back on by reinserting the power cable...



...while at the same time holding the keys 4 and 6 down



3 Whilst the **notification lamp** is flashing, either ...



... press the **1** key to restore default values, or...



... press the **2** key to reformat the flash disk, or...



... press the **3** key to swap software images.



4 The notification button will now be flashing faster. Use the **#** button to confirm the choice, putting changes into effect.

Upgrading the Software of Your 150MXP (I)

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About Software Upgrades

In order to improve and enhance the user experience TANDBERG issues new and updated software for your video system on a regular basis. Updates come in two flavours: Main Releases and Service Releases.

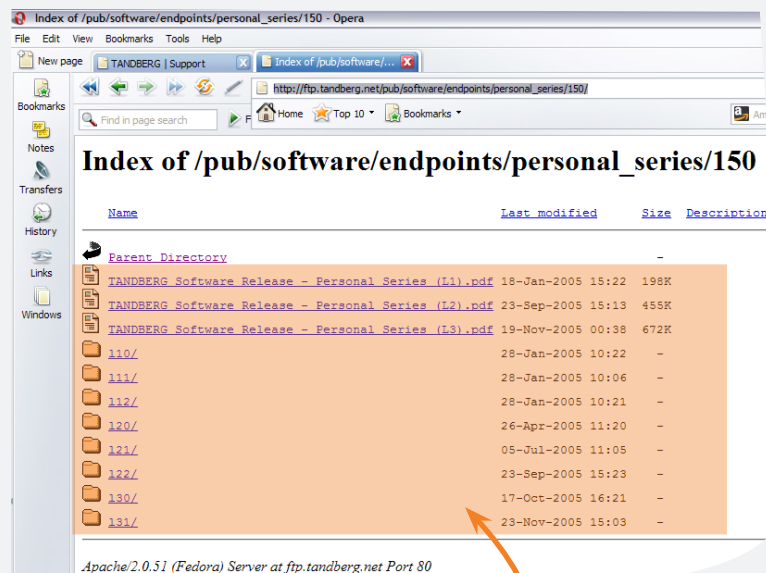
Main Releases contain new features and are available for customers with service contracts only.

However, Service Releases providing minor corrections and function enhancements are available to everyone.

Want to Back up Your Local settings?

You may want to back up your local settings (the local phone book) before you start to upgrade the software. How to take an upgrade is described in [Taking back-up of Your 150MXP Files](#)

- 1 Use your internet browser to access http://ftp.tandberg.net/pub/software/endpoints/personal_series/150/
Your browser will then show the below file structure:



Available software versions

- 2 Select the software version to install and download it to your computer.

- 3 If this is a Service Release no Release Key will be needed. If this is a Main Release a Release Key will have been given to you as a part of the Service Contract.

Cannot find your key? If you cannot locate your Release Key or if this is the first time you install a Service Release since you purchased your 150MXP, you will need to go on the web to let the TANDBERG key generator calculate a Release Key for you.

The reason why this applies the first time you install a Service Release is that the unit will not have a Release Key stored until you perform the first upgrade. The Release Key will be retained after this first upgrade, so that the next time you do an upgrade (this applies to Service Releases only!) the key is already in the unit and you won't need to enter it.

- 4 Use your internet browser to access <https://webkr.tandberg.net/RK/rksn.jsp>

Web Release Key Generator

Logged in: Site EU Ip: 192.168.1.100

1	Type or paste in the serial numbers, separated by spaces, line shift or commas [clear contents]	2	Optional: Select legacy software	3	Generate release keys and option keys
		Newest software		OK	

Do as told, key in or paste in the serial number of your TANDBERG unit, then select the software version to be installed and click OK to have the Release Key generated.

- 5 The Release Key and other relevant information is then displayed as shown in this example.

Sys S/N	HW S/N	Product Name	Shipped SW	Orig. rel. key	Upgrade to	New rel. key	Service Contract	SC End
38A02319	38A02319	TANDBERG 150 MXP NTSC	L2.2 (S51000)	7565763760086296	L3.1 (S51000)	2767034430161131	No service contract	
The released software can be found at http://www.tandberg.net/support/download_software.jsp Export result as Excel (XLS):								

more...

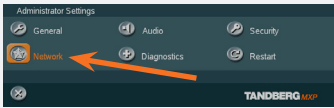


Upgrading the Software of Your 150MXP (II)

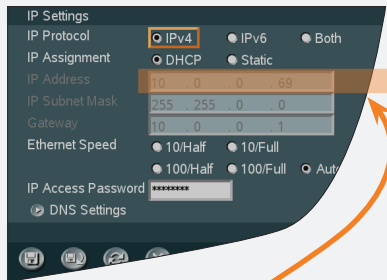
TANDBERG 150MXP
USER GUIDE

- 6 On the 150MXP press the **Settings** key () to produce the on-screen menu.

- 7 Use the **Cursor** keys () to move to **Network**.

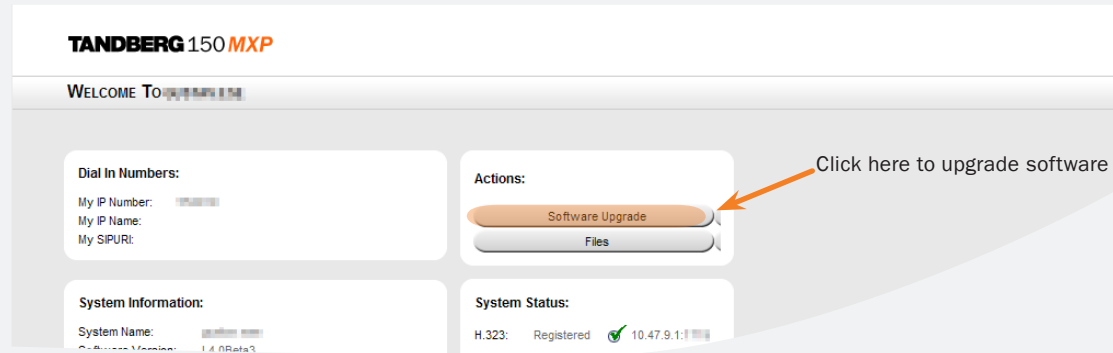


- 8 Press the **OK** () key to produce the **Network Settings** menu.



Locate the **IP address** of your system. This information is also found in **Diagnostics > System Information**.

- 9 In your internet browser type in the IP number of your TANDBERG system. This will produce the below display.



- 10 The following display will now be produced:



- 11 Locate the file to be uploaded:



- 12 The new software will now be installed and the system will reboot.

Appendix

We recommend that you check out the TANDBERG web site regularly for updated versions of this manual:

http://www.tandberg.net/support/documentation.php?p=User_Manuals

Using TANDBERG *MXP* Systems with Microsoft® Live Communication Server and Microsoft® Office Communicator

This Appendix provides a general description of how to set up calls between a TANDBERG system and Microsoft Office Communicator, using a standard Communicator installation, as well as how to integrate the Microsoft Office Communicator with the TANDBERG Management Suite (TMS). Some of this information does not apply to all models of the *MXP* series of products. Whenever applicable this is clearly stated.



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- 78 SIP Rooms

79 TANDBERG TMS SPECIFIC FEATURES (II)

- 79 Placing Video Calls
- 79 Starting a TANDBERG Video Conference
- 79 Start a Video Conversation
- 79 Starting a Web Conference

80 USE WITHOUT TMS

- 80 Placing/Receiving Calls
- 80 Presence

Minimum Requirements

- Microsoft Live Communication Server 2005, with SP 1 or later
- Microsoft Communicator 2005 version 1.0.559 or later
- TANDBERG Video Endpoint supported by TMS
- TMS 10 or later with the TANDBERG Communicator Integration Plug-in
- Client Solution Package Option on the TMS server.

Solution with TMS

TANDBERG Management Suite 10 has been extended with a proper integration with Microsoft Live Communication Server 2005 and Microsoft Office Communicator. It's licensed through the Client Solution Package with a per user license. The integration links users together with video systems, giving Webcam users and video system users a common way of starting video conversations and web collaboration conferences between them. TANDBERG has cooperated with Microsoft during the development of the TANDBERG integration, and Microsoft has acknowledged the integration:

“We're excited that TANDBERG has joined our vibrant industry partner ecosystem, building a valuable integrated video solution on our Microsoft Real-Time Collaboration platform,” said Marc Sanders, senior product manager, Real-Time Collaboration Group, at Microsoft Corp.

From Office Communicator, the integration allows you to:

- Start and end video conferencing calls from standard videoconferencing systems (all systems supported by TMS).

- Users without a video conferencing system can register their Office Communicator web camera in TMS as a SIP room for booking, making and receiving calls.
- Place calls using multiple protocols: SIP, H.323 and H.320
- Dial numbers directly from your Communicator client and it will be routed for you, using the advanced routing engine inside TMS.
- Search for registered video systems and phonebook entries in TMS via Office Communicator, and start calls to the found entries through a single mouse click.
- Start a TANDBERG See And Share conference (web conference). Requires *TANDBERG See And Share* option installed on TMS.

Installation

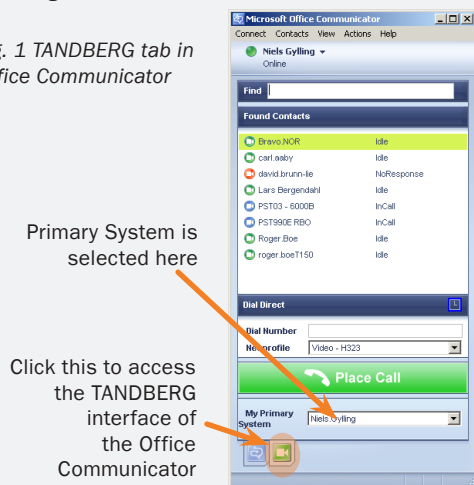
A detailed explanation of how to set up the TANDBERG Communicator integration is given in the document *TANDBERG Communicator Integration User Guide*, which can be found on our web site (http://www.tandberg.net/support/documentation.php?p=User_Manuals) Basically it involves:

- A software package to be installed on the LCS server.
- A registry update on all the Communicator clients computers. The registry can be updated automatically by the administrator using the Group Policy Editor.
- Select a Primary system in the TANDBERG tab added to your Office Communicator.

TANDBERG TMS Specific Features (I)

Once you have installed the TANDBERG Communicator integration you must restart your Office Communicator. You should then see two additional tabs in the left lower corner as seen in the below Fig.

Fig. 1 TANDBERG tab in Office Communicator



The TMS page in Office Communicator

By clicking the tab as shown above, you will produce the TANDBERG interface of the Office Communicator.

Now, do as follows:

- Select your Primary System. The drop-down list includes all systems and SIP rooms registered in TMS. The system selected will be the system used when starting videoconferencing calls using the **Start TANDBERG Videoconference** option in Communicator.
- Search for systems and SIP rooms registered in TMS. The list in **Found Contacts** of the Fig. 1 above will be all systems and phonebook entries in TMS matching the search criteria.
- To place a call simply highlight one of these systems and press the button **Place Call** or double-click on the entry. TMS will now setup a call between your Primary System and the system you just selected.

Alternatively, you can place an add hoc call by entering a number in the **Dial Number** box, select **Net profile** and click the

Place Call button. The **Net profile** will define whether this will be a Video – H323, Telephone – H323, Video – H320, Telephone – H320, Video – SIP or Telephone – SIP call.

This page gives you call status when your system is in a call. The Ad-Hoc call monitoring function in TMS will detect any calls made by your video system, and show the system as busy when in a call with the ability to end it.

SIP Rooms

If you want to use your Office Communicator web camera as your primary system, you must add it as a SIP room to TMS. We recommend that you have your own folder in TMS containing all the SIP rooms (see Fig. 2).

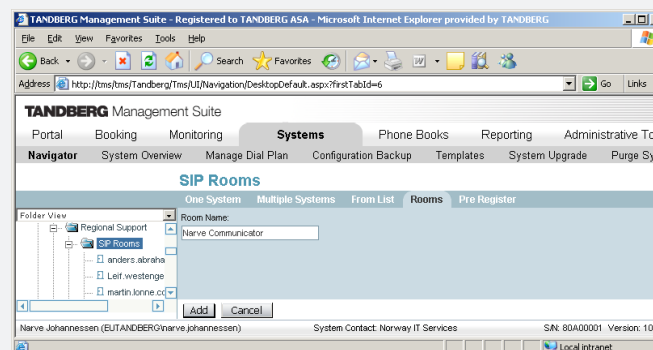


Fig. 2: Folder containing SIP rooms in TMS

To add SIP rooms to TMS, add a room (see Fig. 3) and:

1. Set **SIP Mode** to on.
2. Put in the LCS server DNS name or IP address into the **Active SIP Server Address:** field.
3. Put in your SIP URI into the **SIP URI** field. This is the SIP address others will use to reach you.
4. Set Maximum IP bandwidth (e.g. 384). This is the maximum bandwidth TMS will use when placing calls.
5. Set **Allow bookings** to **Yes**.
6. Uncheck all the **Allow** boxes, except the **Allow incoming SIP calls** check box.

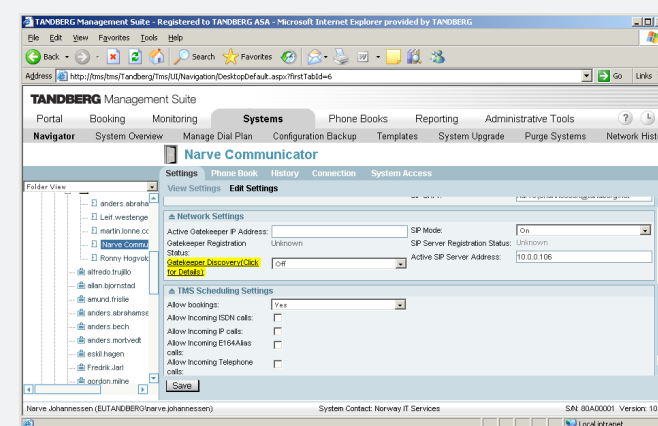


Fig. 3: Configuration of SIP room in TMS

Once this is done you can set your SIP room to be your primary system (see Fig. 1). Each SIP room will count as one system and will use one license in TMS.

TANDBERG TMS Specific Features (II)

Placing Video Calls

There are two ways of starting a video call within Office Communicator once you have installed the TMS LCS integration:

- Starting a TANDBERG Video conference
- Starting a Video Conversation.

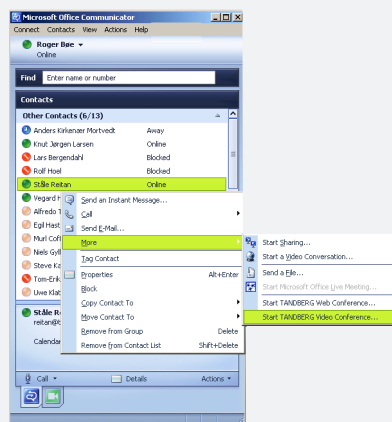
Starting a TANDBERG Video Conference

This option is added as a part of the TANDBERG LCS integration (see Fig. 4 overleaf). By selecting this, TMS will set up a call between your **Primary System** (see Fig. 1) and your contact's **Primary System**. TMS will automatically set up the call between those two units using the best possible route and protocol.

NOTE: For this to work, one of the systems has to be manageable by TMS, or you must have a Multipoint Control Unit (MCU) managed by TMS that can reach both systems. If the call is not possible to set up, you will get an error message indicating what went wrong.

To place the call, highlight a contact, right click with your mouse, select **More** and **Start TANDBERG Video Conference** (See Fig. 4). If you already are chatting with your contact you can start the conference by selecting the **Actions** menu and **Start TANDBERG Video Conference**.

Fig. 4: Starting a TANDBERG Video conference



By starting a video conference this way, you will benefit of business video and audio quality when dialling Ad-Hoc between two H.323 endpoints. You will retain well known H.323 features like: Wideband audio, high quality video (H.264), dual streams with XGA resolution, encryption etc.

Starting a Video Conversation

This is the built in video conferencing tool in Office Communicator and LCS. When selecting this option you will dial SIP between other units registered on the LCS (including other TANDBERG SIP enabled endpoints). Office Communicator will now use a standard web camera connected to your PC when placing the call. The call will be set up without any involvement from TMS.

When you have the TMS LCS integration installed, this can be used as a workaround for dialling between two SIP clients not manageable by TMS, like the Communicator. However it is recommended to have a TMS manageable SIP capable MCU installed, this way you can use the **Starting a TANDBERG Video Conference** procedure for all calls.

Starting a Web Conference

As a part of the TANDBERG LCS integration, ad hoc web conferencing is also supported – as long as the TMS server is configured with a web conference server like TANDBERG See&Share or WebEx.

You start a web conference the same way as you will start a TANDBERG videoconference:

Right-click on the person you want to start a web conference with, select **More** and **Start TANDBERG Web Conference** (see Fig. 4).

Alternatively, if you are already chatting with this person, simply select **Start TANDBERG Web Conference** from the **Actions** menu in the chat window. A new window will now appear initiated by the TMS LCS Integration as show in Fig. 5.

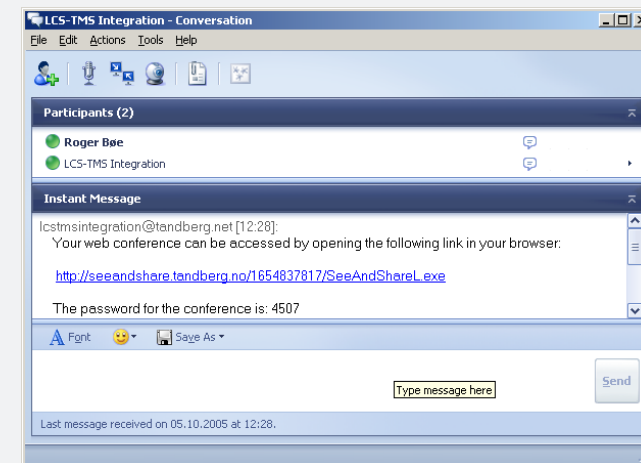


Fig. 5: Web Conference window initiated by TMS

The link in the window will by default be unclickable, due to the security settings in Office Communicator. To make the link clickable, an update to the registry with the following value will be necessary:

```
[HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Microsoft\Communicator]
```

```
"EnableURL"=dword:00000001
```

NOTE: We recommend that this is done by an Administrator, using the Group Policy Editor.

Use without TMS

TANDBERG endpoints with F3, L3 or later software, support registration to Microsoft Live Communication Server (LCS) using NTLM authentication. You will need to configure the TANDBERG video end point somewhat first.

NOTE! The configuration of the TANDBERG video endpoint can for most **MXP** models also be done via the endpoint's web interface. **HOWEVER, THE 150MXP CANNOT BE CONFIGURED THIS WAY!**

To configure your TANDBERG endpoint for registration to LCS, navigate using the TANDBERG menu system to the Network/SIP Settings Menu and configure:

- **Mode:** Set the mode to On to enable SIP on the endpoint.
- **Display Name:** Put in the name you want to be displayed when dialing others
- **SIP Address (URI):** Enter the SIP URI given to you from the LCS administrator. This is the address other Office Communicator clients or TANDBERG units registered to the LCS must use to dial into your unit.
- **Server Discovery:** Set this to manual, unless the LCS server address is given automatically by the DHCP server.
- **Server Address:** If Server Discovery is set to manual, enter the LCS server DNS name or IP address here. DNS name is preferred to avoid DNS issues.
- **User Name:** This is the User Name given to you by the system administrator. Normally this will be the first part of the SIP address URI i.e. if the URI is somebody@company.com the user name will normally be "somebody".
- **Password:** This is the password given by the administrator for the user given in "User Name".

NOTE! Once all settings have been set, you must restart the system and enter the SIP Settings menu again. If the system has registered to the LCS successfully, you will see the message: **Using SIP Server "Server Name/Address" (NTLM).**

Placing/Receiving Calls

Now you can place and receive SIP calls to/from Office Communicator.

If you want to place a SIP call between Office Communicator and the TANDBERG system, simply double-click on the TANDBERG system name in your Communicator and select the Webcam button. In the below example **Roger Bøe** in green, using the Office Communicator client is dialling the TANDBERG system **Roger Bøe**.

NOTE! You can also right-click a name from the contact list, click the **More** link and click the **Start a video conversation...** link to start a video conversation.

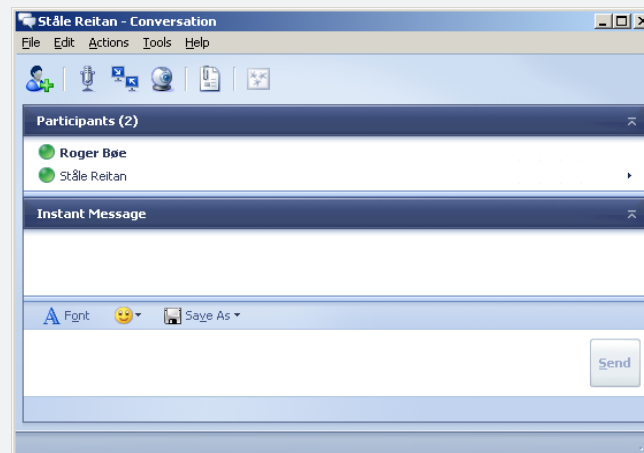


Fig. 6: Dialling a TANDBERG system using SIP from Office Communicator.

You have now established a call between the Office Communicator and the TANDBERG system.

The quality of the call will be:

- **Audio:** G.722.1, 7 Kbps wide band audio in both directions
- **Video:** H.263 CIF (352×288 pixels)/QCIF (176×144). You will see CIF from the TANDBERG system in your Communicator window, but on your TANDBERG endpoint you will only receive QCIF. The reason is that the Communicator client currently supports receiving CIF but only sending QCIF using H.263.
- **Bandwidth:** As default all video calls from the Communicator is set up with 1000kbps as default.

NOTE! This is the maximum bandwidth allowed to be used and is typically much higher than the bandwidth actually used. You can limit this BW by configuring the **MaxVBW** from **Group Policy Configuration (.adm)**.

For more information see the document: **Office Communicator_2005_Planning_and_Deployment.doc** available from Microsoft.

TIP! In a similar way you can dial from the TANDBERG system to other Office Communicator clients simply by dial their SIP URI in the form someone@company.com.

NOTE! When dialling from the TANDBERG system you must set the **Net** to **SIP**, otherwise the TANDBERG system will not make a SIP call. The number that should be dialled is the SIP URI that the user with the webcam is logged in as.

Presence

In the current TANDBERG software versions, presence is not supported. Hence all the TANDBERG systems will always be displayed as **Offline**.

TANDBERG

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